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ISSUES AND PROBLEMS OF VOCATIONAL EDUCATION WITHIN THE CONTEXT OF CHANGING SOCIAL, EDUCATIONAL, AND ECONOMIC CONDITIONS ARE SUCCINCTLY PRESENTED IN THIS SPECIAL REPORT CONDENSED FROM THAT REQUIRED BY THE VOCATIONAL EDUCATION ACT OF 1963--"VOCATIONAL EDUCATION--THE BRIDGE BETWEEN MAN AND HIS WORK, PUBLICATION 2." THE ACHIEVEMENTS AND LIMITATIONS OF THE ACT WHICH ARE DISCUSSED SUGGEST SIGNIFICANT IMPROVEMENTS IN THE STATUS OF VOCATIONAL EDUCATION IN THE UNITED STATES. SECTION I OF THIS REPORT DESCRIBES THE CHANGING SOCIAL AND ECONOMIC ENVIRONMENT WHICH HAS ELEVATED FORMAL PREPARATION FOR EMPLOYMENT TO A CRITICAL LEVEL IN PUBLIC POLICY. SECTION II REVIEWS THE BACKGROUND AND OBJECTIVES OF THE 1963 ACT AND EVALUATES THE ACCOMPLISHMENTS AND SHORTCOMINGS ENCOUNTERED IN PURSUING THOSE OBJECTIVES. SECTION III DESCRIBES THE CURRENT STATUS OF VOCATIONAL EDUCATION. SECTION IV SETS FORTH SOME BASIC CONCEPTS FOR CAREER DEVELOPMENT EDUCATION UNDER CURRENT AND EMERGING CONDITIONS, AND SECTION V DESCRIBES A "UNIFIED" SYSTEM OF EDUCATION FOR EMPLOYMENT BASED ON THESE CONCEPTS. SECTION VI CONTAINS RECOMMENDATIONS FOR IMPROVEMENTS IN THE 1963 ACT AND FOR ADMINISTRATION OF NEW AND CHANGING CONCEPTS OF EDUCATION FOR EMPLOYMENT. (PS)

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VOCATIONAL EDUCATION

THE BRIDGE BETWEEN MAN AND HIS WORK

Publication 1

Highlights and Recommendations
from the General Report of the
Advisory Council on Vocational Education, 1968

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education

The Advisory Council on Vocational Education

November 1966 - January 1968

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education

Letter of Transmittal

December 11, 1967

The Honorable John W. Gardner
Secretary of Health, Education, and Welfare
Washington, D.C. 20201

Dear Mr. Secretary:

I have the honor to submit herewith the highlights and recommendations from the report of the Advisory Council on Vocational Education, 1968. The Council as authorized by the Vocational Education Act of 1963, Section 12, was appointed by you on November 22, 1966. It has the responsibility of reviewing and evaluating current national vocational and technical education programs and making a report of its findings and recommendations. Members of the Council appreciate the opportunity given them to be of service in this project.

Respectfully yours,

Martin W. Essex,
Chairman.

Foreword

Under the provisions of the Vocational Education Act of 1963, the Advisory Council on Vocational Education was directed to review the administration and status of vocational education programs conducted under the Vocational Education Act of 1963 and other Acts and to make recommendations for improvement of vocational education. The Council's report Vocational Education: the Bridge Between Man and His Work (Publication 2) will be published by the Government Printing Office.

However, in order to bring vocational education prominently to the attention of a larger segment of the American public, the Council prepared a special report of highlights and recommendations, which presents succinctly the issues and problems of vocational education within the context of changing social, educational, and economic conditions. The recommendations cited in this special report are condensed versions of those cited in the report required by the Act of 1963.

The American public is urged to review this report and to have concern for the vocational preparation of youth and adults--those in full-time secondary or post-secondary institutions; those in part-time upgrading, updating, retraining, or pre-employment programs; and those whom society has passed by.

Martin W. Essex,
Chairman.

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VOCATIONAL EDUCATION

THE BRIDGE BETWEEN MAN AND HIS WORK

In 1963 Congress gave fundamental and philosophical attention to vocational education for the first time since 1917. The immediate motivation was high unemployment among untrained and inexperienced youth. However, a long-run impetus was provided by the growing importance of formal preparation for employment in an increasingly technical and sophisticated economy. The Vocational Education Act of 1963 not only addressed itself to changing manpower requirements but endorsed a profound shift in the interpretation of principles of Federal support for vocational education. The 1917 Smith-Hughes Vocational Education Act had grown out of the demands of an economy just reaching industrial maturity. Its primary objective was to meet the needs of the labor market. The 1963 Act was the product of a growing sensitivity to human welfare, and its emphasis was upon the people who needed skills rather than upon the occupations which needed skilled people. In the place of the previous focus on seven occupational categories as the boundaries of federally supported vocational education, the dimensions of the new Act were the employment-oriented educational needs of various population groups.

The authors of the Vocational Education Act of 1963, recognizing the need for flexibility in a rapidly changing society and the difficulties of reorienting institutions to keep pace with new demands, built in an evaluation system. Part of that evaluation process was the appointment in 1966 and each five years thereafter of a Vocational Education Advisory Council to appraise the results of the Act and recommend administrative and legislative improvements.

We are the first of those councils, and these highlights and recommendations are based on our report.

In conducting the first of what will be a continuing series of evaluative efforts, this Council faced a number of inherent difficulties we hope to spare others in the future. (1) Given the lag between legislative authorization and appropriation of funds to support it and the slowness and inadequacy of the statistical reporting system, we have actually appraised only two years experience under the Act. (2) Given the pressures of change and expansion to effectuate the new legislation, inadequate advance attention was given to the data and information needs of the Council and to the development of a continuing data reporting and analysis system to assure adequate information for evaluation and decision-making. We hope our experience and recommendations will lead to better preparation for and more adequate evaluation by future Vocational Education Advisory Councils.

Section I of this report describes the changing social and economic environment which has elevated formal preparation for employment to a critical level in public policy. Section II reviews the background and objectives of the 1963 Act and evaluates the accomplishments and shortcomings in pursuit of those objectives. Section III describes the current status of vocational education. Based on the environmental developments and experiences under the 1963 and previous Acts, Section IV sets forth some basic concepts for career development education under current and emerging conditions, and Section V describes a "unified" system of education for employment based on those concepts. Section VI contains our recommendations for improvement in the 1963 Act and for administration of new and changing concepts of education for employment.

I. THE SOCIAL AND ECONOMIC ENVIRONMENT OF VOCATIONAL EDUCATION

The Vocational Education Act of 1963 was one indication of a new stage in U.S. economic and social life. It was part of a growing recognition that the primary source of income and wealth in the world's most advanced and complex economy was no longer the ownership of real property as it had been in the Nation's first century, or native wit and brawn as it was through most of the second. In the few years since the Second World War, a profound change had taken place, making formally developed individual talents and skills an almost indispensable requirement for successful participation in the labor market.

Education in the Pre-Industrial U.S.

The change, like most economic occurrences, came about for dual reasons of supply and demand, neither of which can be identified simply as cause and effect. Education in agrarian America and in the early stages of industrialization had two primary functions. The first was provision of the basic literacy assumed necessary for meaningful participation in democratic processes. The second was acculturation of the masses of immigrants of many languages and backgrounds who flooded into the new melting pot in one of the greatest migrations in history. Beyond those fundamental objectives, education was a "selecting out" process. Its aim was to identify those who aspired to the few professional positions in the simple economy and to see them beyond the common school into a "high" school preparatory to a university education. The growing economy had ample uses for those without formal preparation. To achieve the massive objective of education for literate citizenship, public support was advocated for the common schools and later the high schools. But it was assumed that sufficient numbers of college-educated persons would emerge at their own expense. Thus, the educated tended to be a self-perpetuating elite who could afford their education because their parents could.

The Land Grant College and Agricultural Extension system emerged from the need for professional competence in an agricultural economy which had failed to produce the surplus necessary for higher education. The Land Grant Colleges, in their "mechanic arts" component, also recognized the rudimentary engineering needs of the emerging industrial revolution which gained momentum in the years following the Civil War. The Smith-Hughes Vocational Education Act of 1917 represented an advancing stage in the logic of specialization of labor which was inherent in industrialization. These developments increasingly demanded formal provision and enhancement of at least a few specialized skills. The Act's provision for dominant allotments to vocational agriculture and home economics was probably the necessary political price of public assistance to industries still in a minority position. The system worked well through the twenties, and enrollments continued to grow through the 1930's, even though, not inadequate skills, but lack of jobs, was the pervasive problem.

The Impact of the Second World War

The Second World War brought to full fruition the mechanization process which gave the United States the world's most advanced and complex industrial economy. With half a world to feed and arm and with the cream of its own labor force committed to military combat, the U.S. economy was forced in the early 1940's to multiply its output almost overnight.

Part of the required manpower came from the Nation's farms. Urban industry had been made possible in part by rising agricultural productivity, enabling fewer farmers year-by-year to feed more and more city folk. The massive immigration from abroad had supplied muscles, and, to a lesser degree, skills, but it had also brought mouths to feed. After the First World War, the U.S. labor force had gained sufficient political power to shut off competition from those who came with like ambitions but too late. Thereafter, only the manpower no longer needed by agriculture, added to normal population increases, could provide the labor for industrialization.

For a century outmigration from the farms had been under way but at a speed just great enough to be absorbed by growing industry. The Land Grant Colleges and Agricultural Extension accelerated the growth of productivity in agriculture, but industry's demands were growing simultaneously. Only part of the rising output per man in agriculture came from better farming methods, increased machinery, and improved fertilizers and seeds. The very exodus of the surplus labor inherent in an agricultural economy allowed increases in output per man and, consequently, in the income of those remaining. At the same time, those who left the farm also found higher productivity and incomes in industrial employment. With industry at a rudimentary stage, agricultural emigrants, blessed with initiative and ingenuity and accustomed to hard physical work, were prime industrial labor. At moderate rates of voluntary exodus, those people who tended to be more aggressive and better prepared moved to the city.

With that population shift more than the physical environment changed. The extended family unit was compressed to the primary family unit of husband, wife, and children. Children were no longer introduced to the world of work as family workers under the tutelage of their parents. The number of available occupations was vast and the possibility of becoming acquainted with most of them slight. The gradual entrance to the work force typical of agrarian societies was replaced by the sharp entrance and exit points of the industrial working life.

During the 1930's, a brief cessation of outmigration and even a slight "back to the farm" movement occurred, but this only stored up labor for a more massive emigration and a quick acceleration of agricultural productivity with the return of urban opportunities. The period also brought protective farm legislation which encouraged mechanization and consolidation of farming units and displaced thousands of sharecroppers and other marginal farmers who had no place to go but cityward. World War II changed the speed and the nature of the migration, and ultimately the lot of the migrants. With the advent of war production, the tide of the Depression reversed. Agricultural productivity, which had been increasing at a long-term average of about 1 percent per year for decades, suddenly leaped to above 5 percent--and stayed there. The launching of the auto industry and other industrial booms had been enough previously to attract small floodlets of labor from western farms and southern mountains. The intense wartime demands were sufficient to attract labor from the deep South as well. It also reached the ranks of the retired and housewives who had never before experienced remunerative employment.

However, with 10 million prime age men under arms, the mere recruitment of inexperienced workers was not enough. Their muscles had to be augmented by machines and their physical strength polished by training in sophisticated skills. Almost overnight, school shops and laboratories were re-equipped, instructors were recruited, and 24 hour a day vocational instruction began, oriented to skills in national as well as local demand. Before the war's end, the public schools had trained 7.5 million people for industrial contribution to the war effort.

Postwar Developments

The war ended; the men came home; the older workers re-retired. But the agricultural emigrants never returned to the farm; many women never returned full time to the kitchen. As a reward to those who had expended years of their lives in combat--and perhaps to ease their reincorporation into the civilian labor force--the G.I. Bill was passed. With these events, new and profound changes had occurred in the U.S. labor markets. These markets would never be the same again.

Vast accumulations of unspent purchasing power along with stored-up demands for goods and services kept the economy operating at high, though not forced draft, levels. The Korean conflict delayed the inevitable postwar readjustment by another three years. But during the latter 1950's, new labor market relationships began to make themselves felt. With continuation of price support policies, continued mechanization, and increased awareness of rural-urban income differentials, the pace of agricultural productivity and outmigration slackened only mildly. For those who remained in agriculture, the heavy capitalization required higher technical skills. On the other hand, urban industry was no longer forced to make use of any labor it could get.

The spurt in educational attainment brought the rate of high school graduation from 52 percent in 1940 to three-quarters of the appropriate age cohort in 1965. G.I. Bill-trained college graduates and skilled workers poured off the education and training assembly lines, and their younger brothers and sisters kept up the increasing trend to higher education. Not only could employers choose the better trained and educated, but because well prepared persons were available, a technology was designed to use them instead of their poorly trained competitors. Postwar wage increases, resulting from the release of pent-up pressures, encouraged labor-replacing mechanization. Discoveries accelerated by war responded to the demands with electronic automation. Competition from low-wage countries put a further premium on increased productivity. As plants made obsolete by depression and war were replaced, smooth work flows required single-floor factories rather than the multi-storied ones which had to be frequently abandoned. Continued prosperity and Federal mortgage insurance policies ended the postwar housing shortage in a race to the suburbs. Industry followed in search of building space and trained manpower. It was generally an economy of high opportunity and high displacement.

The New Immigration

The inner city places of the new suburbanites were filled, as they had been for decades, by new immigrants, but this time there was a difference. These were not immigrants from foreign nations of deficient opportunity; they were migrants from domestic economic and geographical sectors of little promise. They had been forced out of agriculture by rising mechanization or attracted out by the promise of higher urban income. Many of the 2.2 million who left the farm between 1950 and 1966 left through the door marked "education" and were quickly absorbed into the prosperous mainstream of American society. But others lacked that education and were marked as well by racial and language barriers. Widespread discrimination then blocked them from tantalizing but out-of-reach opportunities. An estimated 4 million Negroes left the South between 1940 and 1967 and headed for the cities of the North and West. In the process, the proportion of Negroes in city populations doubled to 20 percent over the same period.

In earlier years, low urban birth rates had aided the absorption of the surplus farm labor created in part by high rural birth rates. But in the postwar "baby boom," birth rates were high in the cities, too. Earlier immigrants had been themselves trapped by the slums, but their children had become "Americanized" and had moved on. Because of housing discrimination, the Negroes and other minority groups who were attracted to the cities during and after the war could not follow postwar jobs to the suburbs.

The numbers of jobs these migrants could qualify for with their deficient education and limited experience were declining as a proportion of all employment. Even those jobs which remained were kept out of reach by inadequate transportation systems. The growing occupations in the central city were white-collar and professional jobs held primarily by whites from suburban communities. Many of the remaining service jobs were poorly paid and unattractive but still fewer in number than those seeking them. Thus, the new migrants, forced out by the continued centrifugal force of agricultural technology, were trapped in what became central city ghettoes. Cut off from jobs, they were left to the not so tender mercies of welfare systems which often seemed better designed to punish than to aid the poor. All too often, desertion of an able-bodied but unemployed male was required as the price of assistance to the family.

Most of the immigrants arrived with the triple educational handicaps of segregated, southern, and rural schools, with their children unprepared for the postwar education binge. Their skin color (or language barriers in the case of Mexican-Americans and Puerto Ricans) and lack of skills locked them in. With education-conscious parents flowing to the suburbs and the financial base for school support following, the inner city schools were deteriorating as their job became more difficult. Soon those who needed the best schools had the worst. It was no longer sufficient to "Americanize" the immigrant. He was already American. What he needed were the skills which these inner city schools had never been equipped to supply. Lack of education was only one of many handicaps of the ghetto resident. Its availability could not solve all his problems, but there was no solution in its absence.

Educationally all was not well outside the growing ghettoes either. All those displaced by agricultural productivity and declining employment in non-urban industries like mining and railroading did not become urban poor. Many remained in rural depression. Though 30 percent of Americans still live in rural areas, only one-fourth are engaged in agriculture and they are 43 percent of the total poor. Their inadequate schools became relatively worse as suburban schools progressed and rural areas stagnated and lost leadership. There was little or no job preparation for rural youth or adults except in the agriculture which needed them least. The suburban schools modified their old "selecting out" traditions only moderately, broadening their objectives to include a high school education for all, but acting as if all were college-bound. In cities of moderate size, a tradition of good vocational education continued, though often marked by racial discrimination in some parts of the country.

As a generalization, in the rural areas, vocational education was limited in content; in the large central cities it was poor in quality; in the big city suburbs it hardly existed.

Economic and Education Policy in the 1950's

These trends were aggravated by two policies of the 1950's: efforts to restrain inflation led to economic growth rates slower than those necessary to simultaneously offset rising productivity and absorb a growing labor force. The economy which had grown at nearly 5 percent per year between 1947 and 1953, grew only 2.4 percent per year from 1954 to 1960. The low birth rate during the

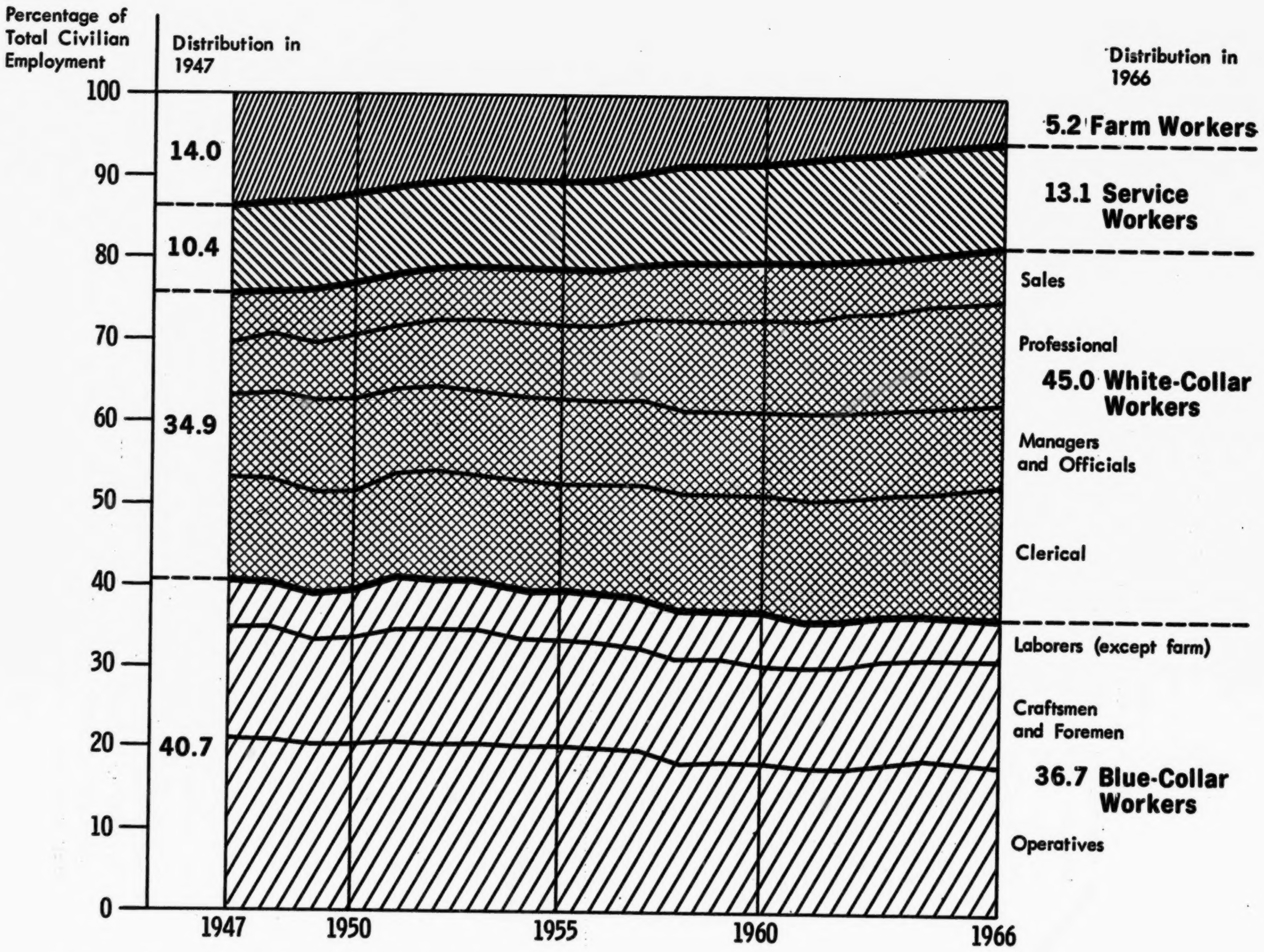
1930's restrained the pressures during the 1950's; but even then, with the labor force growing at an average of over 1 percent per year and output per manhour growing at nearly 3 percent per year on the average, unemployment could only rise. And it did--creeping upward over each of the three recessions which marked the latter 1950's. A national economy which now had to run faster just to stand still, really wasn't trying. In each recession it was the undereducated, inexperienced, unskilled, and the victims of discrimination who were the "last in and first out" and who bore the brunt of unemployment.

The other policy was rising support, particularly Federal support, of higher education. It contributed to the educational opportunities of many, but made labor market competition tougher for those who lacked it. The rationale for the G.I. Bill was replaced by international competition with the Soviet Union. By achieving nuclear weaponry and by grasping an early lead in space exploration, the U.S.S.R. demonstrated an unexpected scientific and engineering potential. The U.S. reaction was to make science, engineering, and technology primary objectives and "education for excellence" the motto. The National Science Foundation and the National Defense Education Act were the legislative vehicles at the Federal level. For the Nation as a whole, the budget for higher education increased from $750 million in 1940 to $4.5 billion in 1960, and the budget for all education, from $3.3 billion to $22 billion over the same years.

In spite of a minor broadening of vocational education in 1946, preparation for the occupations had low status. In 1954, abolition of Federal aid to vocational education was even seriously recommended to the administration. This occurred at a time when female participation in the labor force was on a long steady rise and the labor force participation of males remained almost constant. Thus almost the entire population entered the labor market at some time during their lives and needed skills for employment. The Title II of the Vocational Education Act of 1946, Health Amendment Act of 1956, included provision for practical nurse education and was the only Federal recognition of training for women during this period. It was a very profitable investment indeed.

Just as rising productivity freed labor from agriculture for industrial purposes, continued rises in industrial productivity allowed fulfillment of most of the basic needs for goods and left labor available for services. Thus the period was marked by a continuing shift from a primarily blue-collar and agriculture, goods producing economy toward a predominance of white-collar and service employment. Thus, a changing industrial and occupational mix and a more sophisticated technology sparked rapid growth in the occupations requiring the longest training time and the most advanced skills. At the same time the proportion of skilled blue-collar jobs declined while that of many relatively low-skilled service jobs grew.

Figure 1 CHANGE IN DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATION GROUP, 1947-66



Source: Manpower Report of the President, April 1966.

Reassessment in the 1960's

All of these trends continued through the 1950's, but they converged and were brought forcefully to the public's consciousness in the early 1960's. The immediate factors were the emergence of unemployment as a key public issue for the first time since the 1930's; the influx into the labor force of the postwar baby crop; and the growing demands of minority groups for equal rights, equal opportunities, and equal results. Unemployment in the third post-Korean recession exceeded 8.1 percent (unadjusted for seasonality) in February 1961, cutting deeply enough into the politically potent segment of the labor force to demand and to get action. Whether the primary cause of unemployment was slow economic growth and a deficient rate of job creation or inadequate skills in an economy of abundant but high level employment opportunities became a topic of intensive debate. These discussions focussed attention on preparation for employment and the need for remedial training programs.

As a resumption of economic growth plucked the experienced unemployed from the labor market, attention shifted to the flood of youth who, though better prepared educationally on the average than those already in the labor force, were entering too rapidly for quick absorption. Negro organizations which had congealed around equal access to education, public facilities, and the vote recognized that, without jobs and income, "rights" had little operational meaning. Deficient education in rural depressed areas and urban slums was among the many obstacles to realistic employment prospects. Numerous remedial manpower and antipoverty programs were introduced: the Manpower Development and Training Act, the Community Work and Training Program, the Job Corps, the Neighborhood Youth Corps, the Work Experience and Training Program, and others. Each was intended to solve some portion of the emerging crises, but all stumbled over each other in the process.

Youth unemployment was triple the general unemployment rate; the rate for Negro youth doubled that. Measures of fighting ghetto and depressed area unemployment were unsatisfactory, since even in prosperous 1966, urban slums experienced unemployment rates averaging over 10 percent and reaching as high as 16 percent. Adding the under-employed and those involuntarily out of the labor force developed a "subemployment rate" averaging over one-third. The underemployment and low incomes in rural backwaters were equally depressing.

When the key role of education and training became widely recognized, the schools came in for more than their share of criticism. Ironically, in many ways their problems resulted from their successes. Of the three out of four American youth graduating from high school, approximately half were going on to higher education and half of these were completing college. One result was a mobile, adaptable labor force which was the envy of other industrial as well as developing countries. But too little was being done to prepare for employment the majority whose formal education did not exceed the secondary level. The most serious problem was that the availability of large numbers of relatively well-educated people simultaneously encouraged the development of a sophisticated technology requiring higher education and skills and, therefore, enabling employers to demand and obtain these skills (Table 1). Those lacking education or training, or those whose education was obtained in defective or inadequate rural and ghetto schools, were simply left behind.

One graphic illustration is the following set of facts: Of a little over 1.1 million youths who graduated from high school and entered the labor force in June 1965, 12.4 percent were unemployed the following October. Of these, only 108,000 were nonwhite, but their unemployment rate was 27 percent. Of the 304,000 who left high school short of graduation, only 183,000 or 60 percent were in the labor force in October and their unemployment rate was 20.3 percent. Only 52 percent of the 57,000 nonwhite dropouts entered the labor force, but their unemployment experience was no worse than that of the nonwhite high school graduates.

It was in this milieu that the Vocational Education Act of 1963 was developed. The Federal commitment to vocational education had been small (a little over $50 million in 1962). State, local, as well as Federal educational efforts emphasized the needs of the politically influential one out of six who would achieve a college education. Economists had discovered in the postwar period that education and training were key elements in explaining the process of economic growth. At the same time, the prospects were for continued expansion of those occupations requiring the most preparation and the relative decline of those within the reach of the under-educated and under-trained.

The time had arrived when all workers would need some kind of special training for a successful working life. Yet less than one-half of the noncollege trained labor force had any formal training for their jobs.

Table 1 - The Changing Educational Pattern of Major Occupational Groups, 1952 and 1965

Major Occupational Group	Percentage Distribution of Educational Attainment									
	Less than 8 years		8 to 11 years		12 years		13 to 15 years		16 years or more	
	1952	1965	1952	1965	1952	1965	1952	1965	1952	1965
All White-collar...........	4.9	2.8	22.7	16.0	37.5	40.1	15.7	16.7	19.2	24.4
Professional and Technical.	.6	.8	6.5	4.3	16.1	18.9	21.4	17.1	55.4	58.9
Managerial and Kindred.....	9.8	6.0	32.4	23.4	33.6	36.9	13.2	16.0	11.1	17.7
Clerical and Sales.........	4.1	2.3	24.8	19.4	49.7	54.7	14.5	16.9	6.9	6.7
All Blue-collar............	24.8	16.8	48.1	43.5	22.2	33.3	3.8	5.2	1.0	1.2
Craftsmen..................	17.7	12.0	47.9	40.6	27.2	37.9	5.7	7.5	1.4	2.0
Operatives.................	25.3	17.1	50.1	45.7	20.9	32.5	3.1	3.8	.7	.8
Laborers...................	42.6	28.4	40.9	42.4	13.8	23.9	1.7	4.3	1.0	1.0
Farm.......................	42.5	30.8	38.0	40.7	14.4	22.3	3.6	4.5	1.5	1.6
Service....................	30.7	17.6	43.4	42.9	19.7	31.8	4.4	6.3	1.8	1.4

Source: Johnston, Denis and Hamel, Harvey, "Educational Attainment of Workers in March 1965." Monthly Labor Review, Washington, D.C., March 1966.

Table 2 - Employment by major occupation group, 1964, and projected requirements, 1975 1/

Major occupation group	1964 Number (in millions)	1964 Percent	1975 Number (in millions)	1975 Percent	Percent change 1964-75
Total employment	70.4	100.0	88.7	100.0	26
White-collar workers......	31.1	44.2	42.8	48.3	38
Professional, technical and kindred workers....	8.6	12.2	13.2	14.9	54
Managers, officials, and proprietors, except farm..................	7.5	10.6	9.2	10.4	23
Clerical and kindred workers................	10.7	15.2	14.6	16.5	37
Sales workers............	4.5	6.3	5.8	6.5	30
Blue-collar workers.......	25.5	36.3	29.9	33.7	17
Craftsmen, foremen, and kindred workers........	9.0	12.8	11.4	12.8	27
Operatives and kindred workers................	12.9	18.4	14.8	16.7	15
Laborers, except farm and mine...............	3.6	5.2	3.7	4.2	2/
Service workers..........	9.3	13.2	12.5	14.1	35
Farmers and farm managers, laborers, and foremen....	4.4	6.3	3.5	3.9	-21

1/ Projections assume a national unemployment rate of 3 percent in 1975.

2/ Less than 3 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Source: U.S. Department of Labor, Bureau of Labor Statistics, America's Industrial and Occupational Manpower Requirements, 1964-75.

Saleable skills in the new environment demanded intellectual as well as manipulative content. It was also an environment in which social and political equality demanded realistically equal economic opportunities and results. For many these were achievable only through compensatory education and training. It was toward these dimly perceived goals that the Vocational Education Act of 1963, the Elementary and Secondary Education Act, and other Federal legislation supporting State and local education were aimed.

II. THE VOCATIONAL EDUCATION ACT OF 1963

President John F. Kennedy took office in January 1961 convinced that the high level of unemployment was the most serious domestic problem facing the Nation. One of his first acts was to direct the Secretary of Health, Education, and Welfare to appoint a Panel of Consultants on Vocational Education. As he told the Congress on February 20, 1961:

> The National Vocational Education Acts, first enacted by the Congress in 1917 and subsequently amended, have provided a program of training for industry, agriculture, and other occupational areas. The basic purpose of our vocational education effort is sound and sufficiently broad to provide a basis for meeting future needs. However, the technological changes which have occurred in all occupations call for a review and re-evaluation of these acts, with a view toward their modernization.

Findings of the Panel of Consultants

After deliberating for more than a year, panel members were convinced that two principal failures of vocational education restricted its ability to match the requirements of the fast-changing economy and technology to the vocational needs and desires of individuals: (1) Lack of sensitivity to changes in the labor market and (2) lack of sensitivity to the needs of various segments of the population. More specifically, the panel identified the following limitations:

1. Compared with existing and projected needs of the labor force, enrollments of in-school and out-of-school youths and adults were too small.

2. Service to the urban population, with an enrollment rate of 18 percent in the high schools of the large cities, was grossly insufficient.

3. Most schools did not provide efficient placement services, and few schools had organized programs for systematic follow-up of students after graduation or placement.

4. Programs for high school youths were limited in scope and availability; about one-half of the high schools offering trade and industrial education had four or fewer programs, most of which involved a narrow range of occupations; high schools failed to provide training programs for groups or families of occupations.

5. Research and evaluation programs were neglected.

6. Adequate vocational education programs for youth with special needs were lacking; in many respects, vocational education had become as selective as academic education with regard to accepting students.

7. In many States, youths and adults did not have significant opportunities for post-secondary vocational instruction; curricula tended to concentrate on the "popular" technologies, particularly electronics; insufficient funds and restrictive Federal legislation inhibited the development of certain types of programs, such as office occupations.

8. There was a lack of initiative and imagination in exploring new occupational fields. Severe limitations existed in regard to related training for apprentices, such as adequate classrooms and appropriate instructional equipment; craftsmen used as teachers for related training and skill training of apprentices and journeymen were not afforded adequate opportunities to learn modern instructional methods.

9. Many school districts were too small to provide diversified curricula or proper supervision of vocational teaching activities.

10. Curriculum and instructional materials had not been developed for many of the new occupations. 1/

In its recommendations, the Panel recognized that the legislation under which vocational education had been operating since 1917 was responsible, to a large degree, for the slow responses to

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1/ Department of Health, Education, and Welfare, Education for a Changing World of Work, Report of the Panel of Consultants on Vocational Education, 1963, pp. 206-214.

the changes in the labor market. The programs for which Federal funds were available represented a very narrow part of the total spectrum of occupations. The Panel also charged that the leadership in the area of vocational education had not shown sufficient imagination and initiative to adapt vocational education to the new challenges of a fast-changing economy.

Provisions and Objectives of the Vocational Education Act of 1963

Most of the changes recommended by the Panel were enacted by Congress into the Vocational Education Act of 1963. Of all the Panel's recommendations, two conceptual changes were most important. The first was the concept that vocational education must be redirected from training in a few selected occupational categories to preparing all groups of the community for their place in the world of work, regardless of occupation. Secondly, the Panel insisted that vocational education must become responsive to the urgent needs of persons with special difficulties preventing them from succeeding in a regular vocational program.

The other recommendations of the Panel recognized that, in order to carry out these two major concepts, redirection and reorganization of many services were essential, including research, teacher education, school construction, with a new relationship between the Federal Government, the States, and the local communities.

The Vocational Education Act of 1963 declared that the purpose of the Federal grants to the States was to develop an adequate vocational education system "so that persons of all ages in all communities of the state...will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interest and ability to benefit from such training."

Vocational education was to be regarded as a unified program instead of a number of separate programs identified as vocational agriculture, home economics, trade and industries, distributive education, etc. The new definition of vocational education in the Act specifically incorporated basic and general education as a prerequisite for useful vocational education by including "instruction related to the occupation for which the student is being trained or necessary for him to benefit from such training." /emphasis supplied/

The new Federal funds -- four times the amount authorized by the Smith-Hughes and George-Barden Acts -- could be used for programs preparing individuals for gainful employment in any non-professional occupation.

The 1963 law provided Federal funds to serve these four groups: (1) Persons who attend secondary schools; (2) persons who want to extend their vocational education beyond the high school level; and such persons who have left high school before completion but are available for full-time vocational education before entering the labor market; (3) persons who are already in the labor market--employed, underemployed, or unemployed--and need further training to hold their jobs, to advance in their jobs, or to find suitable and meaningful employment; and (4), for the first time, "persons who have academic, socio-economic or other handicaps that prevent them from succeeding in the regular vocational education program." The 1963 law authorized Federal grants, the construction of area vocational schools, various ancillary services and activities, work-study programs, and construction and operation of residential vocational schools.

For the first time, Federal funds were set aside for research in vocational education. Ten percent of the total funds appropriated for each fiscal year were earmarked for grants to pay part of the cost of research and training programs as well as experimental, developmental, and pilot programs. A National Advisory Committee on Vocational Education was established, along with similar State committees, to enable vocational education experts and representatives from management, labor, and the general public to participate in the planning and administration of these programs. One of the responsibilities of the States under the State plan, which the Commissioner of Education had to approve before granting Federal funds, was the requirement to review periodically the vocational education programs, thereby adjusting them to both current and projected manpower needs and job opportunities. Resources of vocational educators and the State Employment Services were to be combined in determining labor market needs and placing vocational graduates.

Less far-reaching but still important changes were several amendments to the Smith-Hughes and George-Barden Acts:

- States were permitted to transfer funds between categories and between the various laws.

- The definition of vocational agriculture was broadened to include training for any occupation related to agriculture in which knowledge and skills of agricultural subjects are required.

- 10 percent of the allocations for home economics had to be used in training for gainful employment in any occupation which required knowledge and skills in home economics.

- Funds allotted for trade and industrial education could be used for vocational education of young people in high schools without the limitation that at least 50 percent of the time be spent in specific occupational preparation.

- Funds could be used for full-time training of high school students for an occupation in the distributive trades.

- Area vocational education programs became permanent.

- Practical nurses' training programs became permanent and were extended to include other health occupations.

In many respects the Vocational Education Act of 1963 provided a totally new orientation for vocational education and the opportunity for greater flexibility in pursuing it. In eliminating the designated occupational categories, it became possible to offer instruction in all occupational fields. The way was cleared for making vocational education available to all persons in all communities, with particular emphasis on the special needs of youths who live in underprivileged conditions.

Implementing the Act

The 1963 Act did not become operative until 1965. Therefore, any evaluation of its accomplishments must consider the short span of its actual operation.

Our primary task is evaluating implementation of the two major changes contained in the new Act. Is vocational education now offering programs for all groups in the community, or is it preparing only some for selected occupations? Is vocational education now reaching the group of young people who are kept from acquiring occupational skills because of socio-economic handicaps?

Unfortunately, the data collection and program evaluation system is inadequate at all levels--Federal, State, and local. Therefore, our judgment is based on limited data, augmented by our own experience and observations.

Groups and Occupations Served

Table 3 shows a sharp increase in the number of students enrolled in vocational education programs since fiscal year 1964. During fiscal year 1967, nearly 7 million persons attended vocational education classes supported in part by Federal grants. This is 50 percent more than in 1964, when 4.6 million persons were enrolled. However, in evaluating this enrollment increase it must be understood that Federal funds for office occupations were provided for the first time in the 1963 Act and first reported in 1965. This category accounted for an additional enrollment of 730,904 persons in that year. In 1966, this jumped to 1,238,043, or one-fifth of the total enrollment in the year. Fifty percent of the 1966 total were high school students, 42 percent were adults, 7 percent were post-secondary students, and less than 1 percent were persons with special needs (Table 4).

Compared with fiscal year 1964, the number of high school students in 1966 rose by 42 percent, post-secondary students by 150 percent, and adults by 17 percent. Prior to the 1963 Act, Federal funds were not available for training youths with special needs.

By occupational category -- 31 percent of all persons were enrolled in home economics in 1966, 21 percent in trades and industries, 20 percent in office occupations, 15 percent in agriculture, 7 percent in distributive occupations, 4 percent in technical occupations, and 1.5 percent in health occupations.

The increase in the enrollment in the 7 categories of occupations can be summarized as follows:

Agriculture: Enrollments in vocational agriculture increased about 5 percent between 1964 and 1966. The increase in agriculture was due, in large part, to the broadened purposes of the 1963 Act which included training for any occupation requiring knowledge and skill in agricultural subjects.

More than one-half of the students trained for occupations in agriculture in 1966 were enrolled in high schools, and more than

Table 3 - Total Enrollment in Vocational Education

Fiscal Years 1960-1967

Fiscal Year	Total Enrollment	Percentage Increase
1960	3,768,149	
1961	3,855,564	2.3
1962	4,072,677	5.6
1963	4,217,198	3.5
1964	4,566,390	8.3
1965	5,430,611	18.9
1966	6,070,059	11.8
1967	6,880,000*	13.3

* Projected.

Source: U.S. Department of Health, Education, and Welfare.

Table 4 - Vocational Education Enrollment Summary, By Occupational Category and Educational Level, Fiscal Years 1964-1966 1/

Fiscal Year 1964

	Total	Secondary	Post-Secondary	Adult	Special Needs
Agriculture	860,605	501,819	--	265,879	
Dist. Occup.	334,126	55,132	2,688	276,306	
Health Occup.	59,006	5,478	41,698	11,830	
Home Econ.	2,022,138	1,308,453	1,652	712,033	
Tech. Occup.	221,241	20,755	71,824	128,662	
Trades & Ind.	1,069,274*	249,119	53,633	766,513	
TOTAL	4,566,390	2,140,756	171,495	2,161,223	

* Includes 1,614 enrolled in fisheries occupation.

1/ Data furnished by the Division of Vocational and Technical Education, Office of Education.

Table 4 (Continued)

Fiscal Year 1966

	Total	Secondary	Post-Secondary	Adult	Special Needs
Agriculture	907,354	510,279	5,987	390,388	700
Dist. Occup.	420,426	101,728	15,833	301,116	1,749
Health Occup.	83,677	9,793	36,496	37,065	323
Home Econ.	1,897,670	1,280,254	2,652	602,363	12,401
Office Occup.	1,238,043	798,368	165,439	271,149	3,087
Tech. Occup.	253,838	28,865	100,151	124,730	92
Trades & Ind.	1,269,051	318,961	115,539	803,901	30,650
TOTAL	6,070,059	3,048,248	442,097	2,530,712	49,002

40 percent were adults. 1966 data indicate that about 12 percent of the enrollments were in programs for off-farm occupations. The increasing complexity of modern farming has caused an increase in enrollments of adults and young farmers, especially in the area of farm business management. There has also been a considerable development of specialized programs involving agriculture. Such programs as ornamental horticulture and retail floristry are rapidly developing in the urban areas.

Distributive Occupations: Enrollments in distributive programs increased 25 percent in 1966 compared with 1964. Increases were stimulated by the provision in the 1963 Act authorizing pre-employment instruction and by the continued expansion of the cooperative education programs. Only one-fourth of the students in 1966 were enrolled in high schools; almost three-fourths were adults.

Health Occupations: National attention has been focused on the serious need for qualified personnel in the health occupations, and enrollments in health occupation programs increased 41 percent between 1964 and 1966. This increased enrollment, however, still falls far short of meeting the actual need.

Home Economics: Official data show enrollment in home economics decreasing by approximately 5 percent between 1964 and 1966. However, the indicated decline was apparently the result of reporting problems. Even accepting the official figure, the enrollments in this category still represent 31 percent of the total vocational education enrollments. Through the influence of the 1963 Act which limited support to programs designed for gainful employment, there has been some redirection of efforts to develop such programs. However, the 1963 Act did not affect the allocation of 90 percent of the funds through the Smith-Hughes or George-Barden Acts. Of the total enrollment, two-thirds were high school students and one-third adults.

Office Occupations: Office occupations were included for the first time in vocational education under the 1963 Act. Most schools have offered limited courses and programs in this field in the past. Therefore, the increased enrollment includes only those now receiving vocational education who did not formerly receive vocational preparation. Support through the Vocational Education Act of 1963 has encouraged many office occupations classes to be reoriented to more direct preparation for employment. It has also provided the resources for leadership and curriculum development. Two out of three office occupation students attended high school, one out of five were adults, and 13 percent were in post-secondary schools.

Technical Occupations: Technical education enrollments increased about 15 percent between 1964 and 1966. Considerable attention has been focused upon the serious need for technicians in the labor force. However, this category represents only 4 percent of the vocational education enrollments. In 1966, one-half of the persons enrolled in technical education programs were adults and 40 percent were students at post-secondary schools.

Trades and Industries: Enrollments in trades and industries programs were increased by about 20 percent in 1966 over 1964. Programs within this category represent a broad range of occupations. Increased demands for goods and services and a continuing shortage of skilled craftsmen have caused many schools to develop and emphasize programs in this category.

After many years of decline and standstill, the number of apprentices is now rising. On December 31, 1966, there were 207,511 apprentices in training as compared with 163,318 on December 31, 1963. Related instruction for apprentices offered at vocational high schools contributes to the increase of trades and industries students.

Two-thirds of the persons enrolled in trades and industries programs were adults, and only one-fourth were high school students. Less than 10 percent of the persons in this group attended a post-secondary school.

Enrollment by educational level has developed as follows:

Secondary Schools: At the high school level, enrollments tended to concentrate in home economics, agriculture, and office occupations. Eighty-four percent of the students at this level enrolled in these three categories in 1964. Total enrollment at the secondary level increased 43 percent between 1964 and 1966. On a national basis about one in four secondary school students (grades 9-12) was enrolled in vocational programs. The basic gain for 1966 over 1965 was in office occupations, which were reported for the first time for 1965.

Post-Secondary Schools: Enrollments in post-secondary vocational programs rose by more than 150 percent between 1964 and 1966. However, enrollment at post-secondary schools still constituted only 7 percent of the total number of vocational students, and post-secondary students were less than 4 percent of the population aged 18 to 21. Almost 9 out of 10 students were trained in office occupations, in trades and industries, and in technical programs.

Because vocational education at the post-secondary level is a recent development in many parts of the country, there is a great variation among States.

Adults: While adults participating in part-time extension courses accounted for 42 percent of the total vocational enrollments, their number increased only 14 percent between 1964 and 1966. Excluding the apparently declining home economics enrollment, the increase was one-third. Adult enrollments amounted to less than 3 percent of the 25 to 65 year age group. Almost 6 out of 10 adults were enrolled in home economics and trades and industries.

It is significant to note that with attention focused upon continuing education and the need for adult training and retraining, this category has shown the lowest percentage increase.

Persons with Special Needs: Enrollments in this group amounted to only 1 percent of the total vocational enrollment. Of the 49,000 persons in special programs, two-thirds were trained in occupations relating to trades and industries and one-fourth in home economics. In 1965 twenty States reported no enrollments in this category, and 11 States still reported no enrollments in 1966. Enrollments of persons with special needs in vocational education were increased from 26,000 in 1965 to 49,000 in 1966. However, this number represented only a small portion of the population which should be served.

Summary

The enrollment data indicate that more persons were being prepared for work through vocational education programs than prior to the enactment of the Vocational Education Act of 1963. In 1966, 31 persons per 1,000 of the total population were trained or retrained for an occupation in a federally funded program as compared with 21 persons per 1,000 in 1961.

While in the school year 1963-1964, one out of five high school students was enrolled in vocational training, in the year 1965-1966, the ratio rose to one out of four students. However, the largest part of this increase must be credited to the new office occupations category. From 1964 (no office education included) to 1966 (office education included) enrollment rose by 1,504,000 students of whom 1,238,000 were persons who were trained in a business occupation. There is no way of knowing how many comprised a net addition to the enrollment in office education and how many simply represented a shift in accounting from sole State and local support to the Federal grant-in-aid program. Of the remaining increase of 266,000 persons -- 6 percent from 1964 to 1966 - 200,000 were trained in trades and industries occupations.

From 1964 to 1966, the number of vocational students in post-secondary schools rose by 907,000. Of these 907,000 students, 798,000 took training in business education. Of the remaining 109,000 persons, 70,000 students were enrolled in a trades and industries course.

One cannot escape the conclusion that the growth in enrollment, particularly at the high school level, reflects to a large degree the inclusion of persons who were not formerly counted as vocational students. Apparently, the breakthrough for training more persons for more occupations is yet to come.

As already indicated no evaluative data are available to ascertain whether the programs offered to the increased student population have given the proper emphasis to the occupations for which suitable jobs are available.

Unfortunately, reporting by broad occupational categories does not reflect the development of new programs to meet new needs. There is, however, some evidence of redirection of vocational education. In agriculture the development of off-farm programs, and the gainful occupations programs developed in home economics reflect redirection. Another example of this redirection is the transfer of funds from the occupational categories contained in the Smith-Hughes and George-Barden Acts to the overall vocational purposes provided in the Vocational Education Act of 1963. These transferred funds amounted to $2 million in 1965 and over $16 million in 1966 (including $200,000 transferred from the 1963 Act to the Smith-Hughes and George-Barden Acts). However, the major emphasis appears to stress continuation of existing programs.

There is little evidence of much effort to develop programs in areas where critical manpower shortages exist. Examples are low enrollments in health occupations and technical programs. While the annual percentage gains in enrollments are quite large, the actual number of persons enrolled in these programs is extremely small in view of potential labor needs. It is also significant to note that these two programs are primarily post-secondary.

An apparent cause of low enrollments in these two categories is the restricted number of available programs. For instance, few programs have been developed for the broad range of health occupations. They have been primarily limited to vocational nursing and dental assisting. In view of the demand for medical skills, failure to inaugurate such programs is surprising.

Technical education programs have also been severely limited. It would appear that electronics programs have been heavily stressed, closely followed by programs in drafting and design. However, there is presently considerable need for programs extending over a wide range of technical occupations. Greater interrelation is needed between secondary and post-secondary technical programs to prepare students for "career ladders." This cooperation would enable the high schools to serve in part as feeder programs, thus reducing the duplication and overlap between the two levels.

We must allow more time, and we need more experience and data to evaluate the achievements of the Vocational Education Act of 1963 in behalf of those occupations most in demand in the labor market. However, signs of redirection, as provided in the 1963 Act, are clearly discernible. Office education is now accepted as an integral part of vocational education. Training in off-farm occupations is becoming a growing part of agricultural education. Preparing for gainful occupations in home economics is now included in the program of a steadily rising number of schools. New occupations are being added to the programs offered in trades and industries.

Turning from occupations to groups to be served, the relatively low increase in adult enrollments is in large part caused by lack of local matching funds. It is also probably true that lack of local leadership prevents development of additional programs of sufficient quality to convince industry of the value of vocational education in retraining and upgrading their personnel. Many of these leaders have been drawn off to post-secondary programs, and many of the remainder have devoted their time to secondary school programs. In secondary schools, the growth in enrollment is still far behind the needs of the young people who should benefit from vocational education. More than one-half of the students still are being trained in the fields of agriculture and home economics, with less than 5 percent moving into fast-developing service and technical fields.

The number of persons enrolled in post-secondary vocational programs is still very small. The emphasis of the 1963 Act in this area apparently has not been taken seriously. The growth of community and junior colleges and technical institutes has been substantial, although there are still many States that have not built post-secondary schools into their educational systems.

The special need of those who cannot succeed in a regular vocational program is still being largely ignored or neglected by the educational community. This group requires special programs and resources which take time to develop and implement. There is little indication that the problem is being faced.

There are several reasons for the slow implementation of this major new challenge in the Vocational Education Act of 1963:

- Manpower Development and Training Act and Economic Opportunity Act programs offer remedial help with little or no matching of Federal funds, even though their total enrollment capacity is severely limited.

- There are still administrators in vocational education who regard programs for youths with special difficulties as merely remedial and not as the responsibility of the regular vocational education program.

- Since such programs are new in many States, State leaders in vocational education need assistance in setting up the proper machinery for training persons with special needs. (To overcome doubt exchange of successful experiences and programs is vitally important.)

- The U.S. Office of Education has not given effective support and leadership to this provision in the 1963 Act. The program is greatly understaffed. The Office of Education has not developed models or offered effective assistance to State and local agencies to dispel existing confusion as to what constitutes an effective program.

According to the U.S. Department of Labor,[2/] 82 percent of the white high school graduates in 1965 entered the labor force, as

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[2/] U.S. Bureau of Labor Statistics. Handbook of Labor Statistics, 1967, page 50 (Table 27, "Employment status of high school graduates not enrolled in college and school dropouts (age 16-24))."

did 79 percent of the non-whites. This difference between the two groups is relatively insignificant. But, while 11 percent of the white youths were unemployed in 1965, the number of unemployed non-whites was more than double (27 percent). Why were so many of the high school students seemingly trained for unemployment? Could their employability have been increased if special programs of training had been developed? There is little information available as to the nature of the few educational programs and curricula especially devised for these youths. Full implementation of this major provision in the Vocational Education Act of 1963 is an urgent challenge to vocational education on all levels.

Despite increases in enrollment, only a relatively small number of those who are being trained for work acquire their skills through vocational education. Yet the five out of six youths who do not graduate from college should be prepared for suitable jobs. In addition, the rapid changes which are taking place in industry would suggest that between 15 and 25 percent of the labor force would profit from training or retraining. To serve our expanding population, a great increase in the resources devoted to vocational education is required. The results of the G.I. educational bills demonstrate clearly that the economic return to society gained by improvement of our human resources is much greater than its cost.

Expenditures

The following appropriations have been provided by Congress for the operation of the Vocational Education Act of 1963:

Fiscal Year	
1965	- $123,500,000
1966	- 202,500,000
1967	- 218,230,000
1968	- 199,310,000

The total funds available under all Federal vocational education laws (Vocational Education Act of 1963, Smith-Hughes and George-Barden Acts) came to the following amounts:

Fiscal Year

1964 - $ 56,920,000

1965 - 140,460,000

1966 - 259,650,000

1967 - 257,380,000

1968 - 256,460,000

The increase in actual expenditures can be seen from the following table:

Fiscal Year	Total	Federal	State & Local
1964	$332,785,000	$ 55,027,000	$277,758,000
1965	604,646,000	156,936,000	447,710,000
1966	799,895,000	233,794,000	566,101,000

From 1964 to 1966, total expenditures for vocational education increased almost 2½ times. Federal grants to the States rose over 4 times, and State and local expenditures doubled.

Prior to the enactment of the Vocational Education Act of 1963, the States and the local communities had been gradually but continuously increasing their share of support for vocational education. The fear that the greatly expanded portion allotted by the Federal Government would adversely affect the financial contributions of the non-Federal sector has proven groundless. On the contrary, the 1963 Act has stimulated a significant rise in State and local expenditures which more than doubled during the period 1964-1966 (from $278 million in 1964 to $566 in 1966). The local communities have contributed the largest share to this considerable increase in the non-Federal sector (130 percent compared to a 70 percent rise in State expenditures). One of the reasons for the slower response of the States is that many State budgets are planned for a 2-year period. It is likely that the response of the States to the impact of the 1963 Act will be felt more intensely in the budget for the fiscal years 1967 and 1968.

The shortcomings of the reporting system greatly hamper a meaningful evaluation of expenditure statistics. The States report expenditures by occupational category under the Vocational Education Act of 1963 and Smith-Hughes and George-Barden Acts; the reports relating to the six purposes (the four groups served plus construction and ancillary services) are limited to the expenditures made under the Vocational Education Act of 1963. The two portions of the State report - by category or by purpose - cannot be reconciled. Since the States do not have to include in their report that portion of State and local expenditures which is above their matching requirements or which is spent for non-reimbursable programs, the total State and local expenditures are understated. Therefore, even the amount of total expenditures is not fully accurate because it does not include some of the overmatching of Federal funds and does not reflect non-reimbursable programs.

In addition to these limitations, the State reports do not present data on the nature of the education programs; e.g., cost of specific courses within the categories, types of new programs, characteristics of the persons in the four groups, etc.

How has the increase in the financial support for vocational education affected the new objectives called for by the 1963 Act? Do the increased expenditures reflect an adequate response to the needs of the people to be served? Particularly, do they meet the problems of the youths whose academic and socio-economic obstacles make their employability so difficult?

The results of analyzing expenditure data coincide with the observations made on the impact and the meaning of the growth in enrollments. Looking at the expenditures for the years 1964 (before the 1963 Act became operative) and 1966, by occupational category, we find that the portion of the funds spent for trades and industries, distributive, health, and technical occupations remained essentially unchanged, while the ratio for agriculture and home economics decreased by 15 percent. The remainder was taken up by the office occupations, which are now for the first time federally supported. Since the non-reimbursable expenditures for office occupations were not reported prior to the 1963 Act, their present inclusion affects the percentage distribution by category. The fact that the $23 million of Federal funds used for office occupations were matched in 1966 by $148 million from State and local funds, signifies the difficulty of meaningfully analyzing statistical data by category. To a large extent, this amount is not additional money but simply a continuation of expenditure now reported for the first time.

By and large, it appears that more money has been spent for all categories, without changing their relative importance. However, because of the lack of analytical data, and the structures of reporting within the traditional occupational categories, this statistical picture does not reflect the progress of those new programs which emphasize occupations offering growing employment opportunities.

Expenditures by purpose (the four groups to be served, plus construction and ancillary services) are reported only since 1965, the first operating year of the 1963 Act. The States report data by purpose only on the funds spent under the authority of the Vocational Education Act of 1963 and do not include Federal, State, and local expenditures by purpose used under the Smith-Hughes and George-Barden Acts. Therefore, the available data account for only three-fourths of the total expenditures.

In the school year 1965-1966, one-third of all known expenditures were for training high school students, one-sixth for post-secondary students, less than 5 percent for adults, and only 1 percent for youths with special needs. The actual training of persons in these four groups took 53 percent of the total funds for which data are available, while 37 percent were expended for construction and 10 percent for ancillary services.

None of these expenditure data provides a clue as to "how" the money is spent or to the quality of vocational education. They do indicate, however, that vocational education has yet to give the necessary attention to such persons in our communities as the students who want to extend the years of their training and the adults who need updating of their present skills or retraining for new skills. The fact that only $5 million ($2 million from Federal and $3 million from State and local funds) was used for training youths with special needs dramatizes again how great are the obstacles to this major new provision of vocational education legislation. Changes in matching requirements and effective leadership on the Federal and State levels must occur if this objective is to be reached.

Area Vocational Schools

The concept of an area vocational school which would serve more than one school district, would respond more rapidly to the demands of the labor market, and would experiment more aggressively with new programs had gained the enthusiastic endorsement of the more progressive vocational educators prior to the passage of the 1963 Act. The National Defense Education Act endorsed the concept but limited its support to the training of technicians. The Vocational Education Act of 1963 expanded the use of Federal funds for the construction of area vocational schools to include training for any non-professional occupation.

Has this hope been fulfilled? Forty-five States reported construction of new buildings, additions, remodeling, or renovation during the fiscal years 1965 and 1966. Total expenditures for construction were over $106 million in 1965 and about $165 million in 1966. During the 3-year period 1965-1967, 689 construction projects were funded: 214 school construction projects in 1965, 229 in 1966, and 246 projects were approved for 1967. In 1965 and 1966, 72 projects were identified as specialized high schools, 181 as departments of regular high schools, 113 as technical or vocational schools, and 77 as departments of post-secondary schools.

Due to the time lag between initiation of construction projects and completion, the impact of the additional facilities has not yet been reflected in enrollments. It can be anticipated that this impact will begin to show on the enrollment reports for 1967.

It is difficult to assess the qualitative influence of the construction program on vocational education beyond the extent to which additional instructional spaces are made available. However, improvement is clear in at least two aspects of the program: improvement of facilities through remodeling and renovation and updating and upgrading of equipment used for instruction.

One major limitation of the construction program is lack of adequate financial resources to meet the intent and purpose of the Act. The cost of merely renovating and modernizing existing facilities to bring them fully into line with contemporary industrial practice would require financial resources greater than the total funds presently available under the Act. Another major limitation is that large cities have tended to be shorted in the allocation of construction funds in relation to their critical need for facilities. In view of this great need and the present limits on financial resources, careful judgment must be exercised in achieving the most efficient and effective use of such funds. It is questionable whether sufficient planning time preceded the early construction projects funded under the Act. In their State plans, the States were required to submit guidelines for development of area school facilities. Several submitted copies of feasibility studies made to determine the need for establishment of area schools. However, review of the types of occupational programs for which facilities have been and are being constructed indicates that emphasis is on continuation and expansion of conventional programs. There is little evidence of planning for new and emerging occupations and for the critically short occupations.

Area vocational schools must be more than skill centers. They must be schools offering a unified program of general and vocational training responsive to the needs of the labor market in the area. In the rural districts, area vocational schools should prepare the youths not only for available off-farm agricultural occupations but should equip workers with skills needed in the urban centers to which many will move.

While the facility planning office in the Division of Vocational and Technical Education has expressed continuously the need to design facilities for maximum flexibility and adaptability, the States too often ignore this advice and construct facilities which establish rigid parameters on their programs for years to come. The addition to total vocational education capacity is a real accomplishment, but it is still far short of the need and the nature of much of the new capacity may turn out to be a long-run limitation.

Research

Between fiscal years 1965 and 1967 approximately $39 million dollars were expended for research, training, and demonstration pilot programs under VEA '63. Of these funds about 30 percent was expended for research projects, 10 percent for training, and 40 percent for demonstration and pilot programs. The remaining 20 percent supported the work of the two research centers established at Ohio State University and North Carolina State University and of the 44 Research Coordinating Units established in the States.

Research by its very nature requires considerable "lead time" to initiate a program, to establish priorities, to conduct the research, to report results, and to implement the findings. Therefore, it is far too early to evaluate the impact of the research funded under the 1963 Act. However, there is genuine concern at both the State and Federal levels about the nature and value of that research.

New responsibilities were given by the 1963 Act in areas in which there was little background experience to be drawn upon. Therefore, all levels of administration have desperate need for answers to perplexing problems and are searching for the most efficient and effective means of implementing programs consistent with the intent and purposes of the Act. Failure to find all of the needed answers has resulted in disappointment at the failure of research to point the way, and has resulted in recriminations among administrative levels and units.

Probably the most significant accomplishments of the research effort have been establishment of a recognition of the need for research, identification and preparation of individuals capable of carrying out the research, and establishment of administrative procedures which will achieve the most economical benefits from these expenditures.

The most frequent criticism of the research program relates to the lack of tangible evidence of impact made on the vocational programs as they currently exist and the lack of impact on the development of new programs and methods. In this relationship two specific limitations need be mentioned: (1) the lack of dissemination of results and (2) a failure to interpret the results of completed research in operational terms.

A very peculiar legal interpretation was largely responsible for the first limitation. Because Section 4(c) of the Act did not specifically mention dissemination, HEW legal counsel concluded that funds under this Section could not be used for that purpose. There is little evidence that any serious attempt has been made to develop operational programs from completed research, nor is there evidence that any serious effort has been directed toward interpreting research results into operational language.

At the operational level, criticism is aimed at an apparent lack of research into operational problems. This is countered by the assertion that operational problems should not control research, but that research should focus upon long-range permanent solutions to problems. In reality both points of view merit consideration.

While inadequate staffing in both administrative units is partly responsible for the limited operational impact, there is also evidence of lack of administrative cooperation between the research division and the operating division. Under no circumstances should one be under control of the other, but every effort should be exerted to bring about a complementary liaison between the two units. Research must not be limited to merely operational problems, but research which does not affect operations is of little value.

Work Experience Programs

There currently exist several types of work experience programs related to vocational education. The two most common are the cooperative education program and the work-study programs as defined in Section 13 of the Vocational Education Act of 1963.

In the cooperative education programs, the students work part-time and attend school part-time. The arrangement for employment is a responsibility of the professional staff. The purpose of the program is to offer the student a meaningful work-experience combined with formal education in order to develop simultaneously knowledge, skills, and appropriate attitudes.

Work-study programs as defined in the 1963 Act serve, primarily, to aid needy students. Such programs are limited to students between the ages of 15 and 21 and to employment in local educational agencies or other public agencies or institutions.

A distinction between the cooperative education and work-study program is that the first is a planned part of an educational program while the second serves primarily to offer financial aid. In the cooperative program the work experience is supervised by the educational staff. In work-study the work experience is most often supervised by the non-professional staff, thus, losing much of the potential interrelationship.

Allocation of Federal funds for work-study programs was made on a non-matching basis for fiscal years 1965 and 1966. Beginning with fiscal year 1967, the States were required to expend one dollar for every three dollars of Federal funds. Through the stimulation of the 1963 Act, the States made concerted efforts to expand the work-study programs. In 1965, 5 million dollars in Federal funds were made available to the States for this purpose. The appropriation was increased to $25 million in 1966, but it was reduced to $10 million in 1967 and entirely eliminated from the President's budget for 1968. The actual total expenditures (Federal, State, local) came to $2.8 million in 1965 and $20.9 million in 1966.

The rise and fall of the budget is paralleled by the program. Enrollments reported by the States increased from less than 19,000 students in 1965 to over 68,000 in 1966. The effect on enrollments due to the cut-back of funds is not yet known. However, as a consequence of the increased matching requirements effective beginning with the 1966-1967 school year, there were fewer work-study programs than were offered during the preceding year. It can be assumed that they will be further reduced by the deletion of funds.

A preliminary report[3/] of a nationwide study on work-experience programs identifies a total of 4,800 concurrent work-education programs in the United States. Distributive education has the largest number of programs and the largest number of students enrolled. The lowest enrollments were in home economics. There were 2,451 schools which had cooperative education programs which did not have work-study programs, and 1,923 schools that had work-study but not cooperative programs.

A significant achievement of the work-education programs is the removal of the artificial barriers which separate work and education. The establishment and continuation of work-education programs require educational staff involvement with industry personnel. Through this interaction the needs and problems of both are made known and greater understanding takes place. In addition to making curriculum revision more rapidly reflective of current occupations, the programs have great value in providing students with the proper attitudes for the work environment.

An important limitation of the work-education programs has been the lack of financial resources for expansion. Another limitation has been the difficulty of obtaining suitable jobs from employers and of overcoming the efforts of occupational groups to protect themselves from what they consider to be competitive threats to their employment opportunities.

Critics of the work-education programs argue that Economic Opportunity Act programs such as the Neighborhood Youth Corps are sufficient to provide jobs and, therefore, work experience for those who otherwise would not remain in vocational programs. However, these are remedial in nature and are based on family income criteria.

[3/] Concurrent Work-Education (Programs in the 50 States), William J. Schill, Director. Initial Report USOE Project 6-2851.

Thus far EOA work stations appear to be more useful for income than experience purposes, and potential enrollment far exceeds their current resources. There are great advantages in training youths through work-experience as part of regular vocational education programs. There are also many youths in need of income to enable them to further their vocational education. These two needs can best be met by merging and expanding the cooperative work-experience and work-study concepts.

Residential Schools

Residential schools were authorized by the Vocational Education Act of 1963, but their feasibility or desirability could not be proven, since Congress never appropriated the funds to establish such schools. However, experience with the Job Corps, a few residential programs run by vocational educators under MDTA, and residential experience in junior colleges demonstrate that there are those whose home and neighborhood environments make training away from home desirable. Moreover, a large number of potential students live in isolated areas of limited population where a meaningful vocational education curriculum is impossible. The total enrollment in Job Corps Centers and MDTA residential projects meets only a fraction of the need and each of these programs is limited in its clientele. Failure to carry out the original intent of the Act was a mistake which should be remedied by making residential schools widely available.

Administrative Leadership

Redirection of vocational education under the 1963 Act required administrative changes adapted to the new objectives. However, changing a 50-year-old administrative structure is extremely difficult. The administrative structure for vocational education within the U.S. Office of Education was reorganized, following the Act, from an occupational fields orientation to one of unified services directed at meeting the new purposes and responsibilities of the Act. The States have been much slower in responding to the need for administrative reorganization, and most still function on the occupational category basis.

In view of the complex problems of implementing the new law and the limited professional staff available, the Office of Education deserves considerable credit for its accomplishments. Another significant achievement made possible by the 1963 Act was an increase in the opportunities for employment of administrative personnel at the local level. Where this has occurred there has been a significant improvement in the quality of vocational education.

On the other hand, partially because of acute staff shortages, the Office of Education has continued to act primarily as a regulatory or approval agency for proposals submitted by the States. There is little evidence of long-range planning by the Federal agency to stimulate and help the States move in new directions and make qualitative improvement of vocational education.

One of the other inhibiting factors at the Federal and State levels is lack of breadth in administrative staffs. It appears that little attempt was made to bring professional personnel representing other disciplines into administrative positions at any level. In view of the new responsibilities under the Act for persons with special needs and the training and retraining of adults, there is need for professional personnel in psychology, sociology, economics, other social sciences, research, curriculum development, and other fields.

Another problem with the Federal administrative structure has been its almost continuous reorganization. There have been seven internal reorganizations affecting the administration of vocational education during the span of the 1963 Act. While reorganization to meet the requirements of the Act was proper and necessary, as a continual process, it has had a demoralizing and disruptive effect upon the staff.

The State plan and State program of projected activities serve as the contractual tie between the individual States and the Federal Government. The process is subject to a number of major criticisms: (1) the lack of participation by the local school systems; (2) the narrow and restrictive interpretation of certain functions and aspects of the Vocational Education Act; and (3) the restrictive nature of many plans for teacher certification which hindered the staffing of new programs.

A particular problem of the State plan and the program of projected activities is the confusion about their purpose and role. In the State plan, contractual requirements are often confused with program planning. The State plan should become the legal document of mutual accord between the Federal and State Governments. The State program of projected activities should serve as the planning document, describing both short- and long-range objectives and programs.

The Vocational Education Act of 1963 gave the U.S. Commissioner of Education broad powers in approving the State plans and, thus, in asserting dynamic leadership in the direction of vocational education and the implementation of the Vocational Education Act of 1963. Understandably, in the first years the Commissioner could not carry out these powers in full measure. However, the extent to which the mandate of the Vocational Education Act of 1963 will become a full reality will greatly depend on the affirmative actions the Commissioner will take in the future.

Another basic deficiency in overall administration of vocational education is caused by the conglomeration of laws and Federal agencies responsible for closely related aspects of vocational education. Lacking is an effective structure for coordinating the various Acts. This has resulted in much confusion at the State and local levels. The differences in matching requirements and variations in administrative functions have resulted in competition among agencies and have caused local school agencies to seek the most favorable funding before implementing programs. The side-by-side continuation of three separate vocational education acts with inconsistent philosophies and confusing overlap in requirements seems an anachronism. The proliferation of programs and agencies in vocational education, training and retraining, and related areas is an administrative burden which should be removed by consolidation.

Relations with the Federal-State Employment Services

The 1963 Act requires that State plans and projected activities include provisions for cooperative arrangements with State Employment Service offices for occupational and labor market information, vocational guidance, and placement services. Though some preliminary "sparring" occurred, little progress was made during the first two years. Educators accused the Employment Services of failing to provide required labor market information. The latter countered that the educators had yet to define their needs. The Employment Services also complained that they could not supply additional services within the constraints of their existing budgets, yet there was no provision for transferring of vocational education funds or purchase of the necessary services.

Progress was even slower in vocational guidance and placement services. The Employment Service has had for many years a Cooperative School Program wherein Employment Service personnel visit high schools to test and counsel those members of senior classes not planning to enter college. Beyond this continuing program, no significant efforts were made to establish a special relationship with vocational education. Vocational instructors customarily place their better students through informal industry contacts. The remainder, usually a minority, seek their own jobs by a variety of methods including registration at the public Employment Service. The Employment Services occasionally "outstation" personnel in junior and community colleges to provide placement services but rarely in high schools and vocational schools. Thus, the special guidance and placement assistance contemplated by the Act was not provided to vocational education students or graduates.

Although excellent relations between local Employment Service personnel and local vocational educators exist in some areas, relationships were nonexistent in others. The 1963 Act itself appears to have had little if any effect. The Manpower Development and Training Act, on the other hand, is having a notable impact. Whereas the VEA '63 directive was a pious hope with no built-in leverage, MDTA funds could flow only if Employment Service personnel identified eligible trainees and potential job openings and if vocational educators established courses to match them. More recently, this relationship has been elevated into the Cooperative Area Manpower Planning System which brings together into a common area, State and regional planning effort all agencies involved in remedial manpower and antipoverty programs. At the same time, MDTA brought about the establishment of State and local manpower advisory committees, a few of which are beginning to look beyond the Manpower Development and Training program to the totality of community and State manpower problems. In Iowa, MDTA research funds were used to establish an overall State Manpower Development Agency. Another was established in West Virginia by the State Legislature. Other States are currently at various stages in establishing similar committees.

Although the Vocational Education Act can claim little credit for these improvements in local relationships, significant developments are currently under way at the Federal level. In 1966, the Department of Labor took the initiative by funding a study under the direction of Dr. H. Ellsworth Steele of Auburn University. This study assessed the status of existing relationships, identified the services needed from the Employment Service, and made recommendations to meet the needs. The report pointed up many sound local relationships but also found that some State vocational agencies had already begun to set up manpower survey units which duplicated Employment Service activities or capabilities. Much of the needed information was already available from the Employment Service but was unknown for lack of communication.

The Steele report led to the establishment, for the first time, of formal Vocational Education-Employment Service relations at the Federal level. A joint Employment Service-Office of Education Liaison Committee is working toward a joint occupational taxonomy, exchange of information on occupational requirements, and administrative procedures for transfer of data. Study is under way to ascertain the need for broadening the Employment Service Cooperative School program to cover vocational and technical schools and to assure Employment Service representation on State Advisory Councils and Vocational Research Coordinating Units.

Joint regional meetings are in the planning stage, and the USES has requested officially that its State agencies commence immediately to fulfill information requirements not previously met. The need for budget and staff resources to support Employment Service activities serving vocational education remains a serious obstacle. However, the likelihood is that the increased Federal cooperation and activity will soon lead to improved local relations.

Reporting and Evaluation Requirements

The 1963 Act required the States to conform to whatever record keeping and reporting procedures the Commissioner of Education might direct and required them to evaluate their own performance periodically. An Advisory Council on Vocational Education was also to be appointed in 1966 and each five years thereafter to review the administration of vocational education programs under the Act and to make recommendations for improvement. All are inextricably related. The shortcomings of the latter are primarily attributable to the failure of the former.

As the first Advisory Council on Vocational Education, we have found it impossible to determine to our full satisfaction what has occurred under the Act. The States may be faulted for the inadequacy of their own internal evaluations, but the primary responsibility must rest at the national level. Despite the long fore-knowledge of the 1966-67 assignment, no significant studies were undertaken with adequate lead time to produce data for the Council's needs. The regular reporting system was inadequate for the purpose. No significant changes were made in the reporting forms which were designed originally to ascertain whether the States matched the Federal grants-in-aid and spent the moneys within the appropriate occupational categories. The only significant change in the reporting system as a result of the Vocational Education Act of

1963 was the reporting of expenditures and enrollments by service groups. Thus a reporting system originally established for regulatory purposes was expected to serve as the basis for evaluation -- a task for which it was inadequate.

Numerous limitations of the present reporting system could be cited, but a few will suffice. Although the Act's philosophy refocused effort on people instead of occupational groups, the statistics provide no demographic characteristics beyond the sex of the students. At a time greatly concerned with racial discrimination and poverty, no information is available on age, race, education, and family income. Although groups with special needs were supposed to receive special treatment, there are no data to identify them nor to describe the content of courses designed for them. There is no way to determine if the Act was successful in its intent to encourage training for new occupations. Enrollment data do not indicate the extent of student involvement. Participation for one or two days, a week or a few months is not differentiated from near full-time or full-year attendance. Data needs are qualitative and descriptive as well as quantitative. The quality of teachers, equipment, and course content cannot be determined from the reporting system. Comparisons of relative enrollments and quality and quantity of vocational education in rural areas, small and medium size cities, suburban areas, and large cities cannot be made. The only common measure of results is a report of uncertain validity from the vocational teacher in September on the placement of students who completed a course the previous spring. An 18-month lag for publication of data appears to be standard. Not only is the extent of non-federally supported vocational preparation unknown, there is even great uncertainty as to the total amount spent on federally reimbursed vocational education. Since States often overmatch the Federal dollars, it appears to be common knowledge that much of the total State expenditure goes unreported.

There are, of course, many problems involved in the establishment of an adequate reporting and evaluating system. Some are soluble technical problems. Others, stemming from the lack of staff and budgets at Federal, State, and local levels, can be solved with money. In particular, if the Federal Government wants accurate and adequate reports and evaluation, it will probably have to provide funds to the USOE for this purpose. It should not expect to withdraw funds from basic support budgets for reporting. The more important problems, however, are those of politics and leadership. Traditions of State and local independence in vocational education are strong and sensitive, but the reporting of pertinent data need not violate them. Actually, many States already accumulate most of the needed data in order to manage their own programs and need only to be asked for it. The Commissioner of Education already has legislative authorization to demand it and sufficient sanction to get it, but this authority remains unused.

The gaps in statistical data, the deficiency in depth of reporting, as well as the lack of adequate standards for evaluation of performance are not merely mechanical or technical problems. They are actually problems of leadership. Without accurate and adequate information, administrators cannot give direction. And giving clear direction as to how to carry out the objectives of the Vocational Education Act of 1963 is the responsibility of the leaders in vocational education.

It is the responsibility of Federal leadership to (1) carefully design a system which will yield the pertinent information with a minimum of expense or burden to State and local educators, (2) sell the latter on the need for the data, (3) see that it is obtained accurately and on time, and (4) see that it is used for meaningful evaluation. This process undoubtedly would be expedited if part of the cost of data collection could be paid to the States.

Advisory Committees

Federal and State legislatures, industry and labor representatives, and many school administrators have recognized the benefits of advisory committees in developing effective vocational education programs. For many decades, ad hoc committees, particularly on the local level, developed curricula, evaluated school programs, and increased the interest of the community in vocational education. The Vocational Education Act of 1963, however, added new functions to the role of advisory committees. In step with the policy of involving the economic groups of the society in shaping policies, planning and implementing training programs, the 1963 Act set up a National Advisory Committee on Vocational Education. The Act also made mandatory the creation of State advisory councils in all States where "persons familiar with the vocational education needs of management and labor in the state" were not represented on the State board which administers vocational education. To the National Advisory Committee was assigned the important responsibility of advising the Commissioner of Education on all policy matters, including preparation of general regulations for all Federal vocational education programs.

How seriously have the administrators of vocational education taken this mandate of the Vocational Education Act of 1963?

No reports are available that permit an evaluation of the contributions that the new boards have made. On the local level the old-established ad hoc committees have continued to give valuable assistance to the planning and administration of vocational education programs, but in many States the boards have yet to come to grips with their statutory duties.

The responsibility to make better use of these committees rests, to a large extent, with the U.S. Office of Education. Basically, it is the role of the Office of Education to give leadership to the advisory committees on the national as well as on the State levels and to stimulate interest in the effective use of committees for planning, coordination, and evaluation of programs.

The National Advisory Committee on Vocational Education will not function properly unless full-time staff is assigned to coordinate its work with the Office of Education and to relate continuously the work of the Office to the Board members. The State advisory committees will not function properly unless the Office of Education gives serious leadership to the States through guidelines and publications, including "how-to-do-it" instructions.

Advisory committees should not be regarded as a chore to which the administrators give lip service. They are conveyor belts which transmit the interests and needs of the "customers" to the "producers" -- administrators, policy makers, and teachers.

Supporting Services

The Vocational Education Act of 1963 requires that at least 3 percent of each State's allotment be used for ancillary services to assure quality in all vocational education programs. Actually, the States spent almost 10 percent in 1966 for this purpose, a total of $49,663,000 in Federal, State, and local funds. The 1963 Act defines ancillary services in a very broad sense, listing six specific examples: teacher training and supervision, program evaluation, special demonstration and experimental programs, development of instructional materials, State administration and leadership, and "periodic evaluation of State and local vocational education programs and services in light of information regarding current and projected manpower needs and job opportunities."

Here again, the reporting system is not very helpful in evaluating the effects of the ancillary services and activities on the quality of vocational education.

The number of vocational teachers (full-time and part-time) increased from 109,000 in 1965 to 124,000 in 1966, a gain of 16.6 percent. The increase is promising, but estimates are that a 150 percent increase during the next decade will be needed to meet projected enrollments. This, along with the continuing need for upgrading present teachers, is a major challenge.

Although the States and, particularly, local school administrators are now giving greater attention to vocational guidance and counseling, the size of the guidance staff in vocational education is still much too small. Only one out of ten academic high schools are without a counselor, but only half the vocational schools furnish guidance and counseling services. Only one-half of the States have guidance personnel on their staffs, usually one person to each State. The guidance and counseling functions at the U.S. Office of Education are also greatly understaffed.

Adequate counseling services are indispensable to high-quality vocational education. Little progress has been made since the enactment of the 1963 Act toward offering vocational students the same services that are provided--at least in some States--to the college-bound students. Practically no guidance and counseling services are provided to out-of-school youths and adults and very little to youths with special needs. However, the critical need for more counseling and guidance for vocational students at all levels should not be an excuse for creation of a separate counseling and guidance system. What must be available are well-trained counselors familiar with the full range of opportunities open to all youths, not those so specialized that they tend to bias students' decisions in one direction or another.

Lack of data prevents evaluative statements as to the impact of the 1963 Act on most of the other supporting services for which Federal funds can be used. In some States significant demonstration and experimental programs on the local level are now in progress. Important experiments and demonstrations are also supported by other programs such as those in MDTA skills centers. Some progress is being made in preparing curricula and instructional materials. No definite information is available as to the impact on the quality of programs.

Research projects funded by the Division of Comprehensive and Vocational Education Research have investigated problems and practices of various ancillary services, including teacher training, curriculum development and administration, and leadership in vocational education. The Research Division also has funded several national seminars for leaders in vocational education; e.g., for guidance personnel and for teachers and administrators in several occupational categories.

The Impact of the Vocational Education Act of 1963

In summing up accomplishments, or their lack, one constantly must be aware that insufficient time has passed to permit the new law to be fully implemented. The impact of changes is clearly visible in some areas, and, thus, credit should be given for achievements. In other areas, the objectives of the new law have not yet been accomplished, and a faster pace is in order.

The Vocational Education Act of 1963 introduced two new basic purposes into the Nation's vocational education system: First, vocational education was to serve the occupational needs of all people in the community through unified programs rather than to train them in separate programs of selected occupational categories. Secondly, a new group was to be served: the persons who could not succeed in a regular vocational education program because of educational, socio-economic, and other obstacles. There is little evidence that either of these major purposes has been accomplished so far.

The second main objective -- to serve the youths with special needs -- has hardly been touched.

The box score on other changes has been considerably higher: Home economics has made real progress toward a greater concern for gainful employment; research in vocational education has begun; area schools have been rapidly established; business education has been accepted as an integral part of vocational education; time requirements for vocational programs have been brought more into accord with needs, instead of being rigidly prescribed; a start has been made toward effective relationships with the Employment Service; work-study programs have been successful; a Federal Advisory Committee on Vocational Education has been established; States have more balanced representation on their Boards of Vocational Education and their Advisory Committees; and vocational guidance has been improved in quantity and quality.

III. THE STATUS OF VOCATIONAL EDUCATION

The achievements and limitations of the Vocational Education Act of 1963 discussed above suggest significant improvements in the status of vocational education in the United States. They also indicate the continuance of substantial problems. Because of the absence of information on who receives vocational education, how much they receive of what kind, what its quality is, and what happens in the lives of people as a result, we have been unable to complete satisfactorily our assignment to appraise the results of VEA '63. However, we have access to a number of limited studies, and we aggregate among us considerable experience with vocational education in various parts of the country and under varying circumstances. Quality, quantity, and practice differ greatly by State and community and across rural, suburban, small city, and large city areas. Generalizations, however, can be made. One distinct generalization is this: In vocational education the Federal Government gets greater results per dollar spent than in any other occupational preparation program. The 100,000 vocational teachers are one of the Nation's greatest assets, and the work they do must be expanded, as well as improved. What follows is our best judgment of the general status of vocational education in the United States of America on January 1, 1968.

Who Gets Vocational Education?

Overall enrollments increased from 4.5 million to 6 million between fiscal years 1964 and 1966, but secondary level enrollment constitutes only a quarter of the total high school enrollment of the Nation, even though five out of six youths never achieve a college education. Less than one-half of the noncollege-trained labor force was found by a 1964 Labor Department survey to have had any formal training for current jobs. Less than 4 percent of the 18-21 population were enrolled in post-secondary full-time vocational education, with less than 3 percent of the 22-64 population involved in part-time adult extension courses. Yet we are convinced that the time has arrived when almost every person requires some formal preparation for employment and most will continue to need some type of continuous upgrading.

As mentioned in preceding sections, even more troubling is the fact that vocational education still appears to suffer most in quantity and quality for those who need it most. Rural high schools tend to be too small to offer more than agriculture, home economics, and office education. Most of their students will ultimately seek urban jobs but have no preparation for urban life. This deficiency has been particularly serious for rural southern Negroes whose resultant plight can be observed in most large cities of the land. Generalized programs of orientation to the world of work could be provided within the resources of small rural schools, but a satisfactory solution will require consolidation of schools and, in some parts of the country, residential schools.

Vocational offerings also tend to suffer in both quantity and quality in the slums of large cities if for no other reason than that most school offerings suffer from overcrowding, deficient personnel, inadequate budgets, and deteriorated facilities.

Many suburban high schools still assume that all students will pursue a four-year-college degree. Their vocational offerings tend to be high in quality but often deficient in quantity. Thus, as a general rule, adequate vocational offerings for secondary school youth are found most frequently in cities of small to medium size faced with none of the crushing rural and slum problems.

Viewed by sex and age groupings, vocational education opportunities are currently most inadequate for women and out-of-school youth. There are too few meaningful occupationally oriented public school courses and programs available for any adult, most evening courses having more of a hobby orientation. Proprietary school courses are available in some areas but not in others, and tuition is an obstacle. For women the problem is worse because of the limited range of courses offered even for girls in school.

A third of our labor force is made up of women, most of whom are expected to cope with the difficult task of maintaining a home and a career simultaneously. Women predominate as students in practical nursing, business education, and the homemaking programs. They are reasonably well represented in distributive education. They rarely participate in agriculture and trade and industrial education programs. Since employment of women is high in manufacturing and service occupations, vocational education must strive to meet their needs in these fields. The first step is for vocational educators to become aware of the available employment opportunities for women in many fields, arrange courses to meet their needs, and structure existing courses to attract their enrollment. The second step is for counselors to encourage their participation outside the traditional areas. Research clearly indicates that women profit even more from vocational education than do males.

The persons least well served by our society and by our education and training system are those out of school and under age 20. Graduates of the general high school curriculum, graduates of the college preparatory curriculum who did not attend college, and graduates of the many vocational curricula which have lost touch with the world of employment have nearly as many problems as the people we label "dropouts."

It is becoming increasingly difficult for persons under age 20 to obtain a meaningful job. Equally demoralizing is the fact that the employment they can get is often temporary and usually low paid. The prospect for young persons in the future is even more bleak, for employment of youths is almost certain to become more difficult.

We have begun to see some of the explosive social consequences of a large group of unemployed and underemployed youths between ages 16 and 20. They have been heavily involved in urban riots, and, in rural and urban areas alike, they are responsible for far more than their share of crime and vandalism. Costs of their depredations are astronomical in property values, and costs of human suffering are incalculable.

The only practical solution seems to be to keep youths occupied in worthwhile activities until they are ready for employment. For much of this group the best place is school. Yet this is the group the current vocational system is least prepared to serve. Such remedial manpower and antipoverty programs as the Manpower Development and Training Act and the Job Corps can currently enroll only tens of thousands when hundreds of thousands need help. The schools must have help to meet this massive need.

Special attention to those with "academic, socio-economic and other handicaps" was one of the new directions of the Act, but as indicated above, this is not among the impressive accomplishments. Fragmentary information suggests, and experience confirms, that vocational students tend to be substantially below other students in general capability. Yet too often the better schools attempt to upgrade their student bodies and enhance their prestige, not by providing special help to those who need it, but by actually eliminating such students by more stringent requirements.

In some school systems, vocational education serves as a dumping ground for academic misfits. In others, where vocational education has a strong voice in policy determination, it tends to reject these misfits, so that they are placed in the "general" curriculum which prepares them for nothing. As a general rule, the academically able students are eligible for vocational education, but the least able are rejected. These able students are the very ones employers seek for industrial training programs. The students who are left out are those with low motivation and poor preparation, though these are two handicaps with which vocational education copes well. Many students come from homes which do not stress verbal skills. Vocational education places emphasis on doing, and provides strong motivation to learn those academic skills which are needed for occupational success. Here many students learn for the first time that reading, arithmetic, and report writing have utility in the real world.

We believe three actions are essential if youths with academic, socio-economic, or other handicaps are to be served well: First, a substantial portion of vocational education funds must be reserved for the hard-to-reach and the hard-to-teach. Second, admission requirements for vocational education must be based on ability to succeed in a field of work, rather than on academic grades or rank in class. Third, we are firmly convinced that the "general" curriculum as it is narrowly construed in many areas must be abolished. It promises to prepare students generally for life, but, in fact, it prepares them for nothing. It is a trap for those students who are not admissible to the college preparatory or vocational curricula--a trap from which the students can escape only by dropping out or by graduating with no preparation for work or life. We repeat that we support general education, but we cannot support the "general" curriculum.

The problems of youths with academic and socio-economic handicaps are amplified for members of minority groups. Limited information indicates that, in large cities, a higher proportion of Negro than white youth tends to be enrolled in vocational courses, while the opposite is true elsewhere. However, given their gross underenrollment in college, the occupational training needs of Negro and other minority youths are far greater than these enrollments could meet. Some of the higher proportionate, large city enrollments may also stem simply from the "dumping ground" proclivities of some academic educators applied to youths who start with the handicaps of inadequate education in the home and built-in disincentives in the streets and the elementary schools. Although there are no hard data, experience suggests under-representation of Negroes in vocational courses in rural and small city schools and gross under-representation in post-secondary vocational education and adult extension courses. Data from the Civil Rights Commission indicate that most vocational education is provided in de facto segregated schools. Observation indicates a tendency to offer training in lower skills in minority schools than in predominantly white schools. Even more serious under-enrollment probably exists for such minority groups as Mexican-Americans and Indians. A serious quality problem exists if for no other reason than that minority groups tend to live where all schools need sharp improvement. However, the limited studies which are available do indicate that minority group members who receive vocational education profit from it to a higher degree than others.

The Present Nature of Vocational Education

Teacher Education

Although there is need for improvement in the amount and quality of teacher education, the competence and dedication of instructional staffs is generally impressive.

The teacher of vocational education is generally competent in his field, and he knows how to teach. In all fields except trade and industrial education, he is usually a college graduate. In agriculture and home economics he learns the content of his teaching field at home and in college in situations structured to promote teaching and learning. In the health fields and business education he learns this content in college and on the job. In distributive education and trade and industrial education, the content is often not taught in college, so he learns it as an employee, usually before he begins to think about teaching as a career.

The practice of structuring teacher education along the traditional occupational category lines perpetuates fragmentation of vocational education, severs it further from general education and hinders adaptation to labor market change. What is needed is "vocational teacher training," with specialization at advanced levels, not separation by category throughout.

Instruction in how to teach is usually provided by a college; in the case of trade and industrial education and distributive education, after the teacher has begun to teach. Shortly after the teacher is employed, he acquires tenure, so it is very difficult to dismiss him. Though the subject he teaches might no longer be needed, he too often continues to teach it until he retires. If the content of his field changes, he usually goes back to school or goes back to work during summers to bring himself up to date. If he does so, however, it is at his own expense. Some teachers choose to grow obsolete, spending their summers in such employment as selling encyclopedias to make more money than they could earn in their own field. Soon they are no longer employable in their occupation, but they may be allowed to continue to teach it anyway. While the dedication and ability of most teachers is commendable, built-in procedures are needed to keep current those who desire to do so, encourage those who do not, and weed out those who will not.

Counseling and Guidance

The lack of counseling and guidance is a particularly unfavorable point. In specialized vocational schools, counselors are interested and competent in vocational counseling. High school counselors in general, however, have too little knowledge of and interest in vocational education and the labor market.

Most guidance personnel are oriented by past experience and by community pressures toward providing educational guidance for higher education. They know colleges and college requirements, but they do not know enough about employment outside the professions or about the requirements for such employment. Vocational guidance cannot be considered apart from educational guidance and guidance aimed at changing attitudes and resolving personal problems. Guidance for all these purposes must form a coherent whole. Nor can vocational guidance be considered apart from the educational program, for the educational program determines very largely what every student is taught about the world of work.

Two actions seem to us desirable: First, employment of guidance personnel who have experience and knowledge of the world of work and its requirements and integration of such personnel in the regular guidance staff to handle specific student problems and to reorient other guidance workers. Secondly, development of a systematic program which will enable the regular guidance staff to acquire knowledge of and experience in the world of work.

Pre-Vocational Instruction

Equally important, we feel, is modification of the school program to provide, as a part of the course work of all students, instruction designed to acquaint them with today's world of work. At present we have almost none of this, for the Congress has decreed this off-limits to vocational education, and Federal funds may not be used for this purpose. Much of the present instruction is actually misleading. For example, in the elementary school, children are introduced to only a few occupations (postman, fireman, and policeman), and what they do learn is so antiseptic that the real requirements and duties of these jobs are never touched. In the junior high school, industrial arts for boys is primarily concerned with development of leisure-time pursuits, with activities limited largely to those pursued by the individual. The view of industry given the student is that of 200 years ago when goods were produced by individual craftsmen on a custom-order basis. Home economics at the junior high level does a better job, although it introduces girls primarily to the middle-class home where the wife has both time to sew and money for expensive appliances. Little or nothing is taught about the problems of the working wife or about occupations other than home-making. In the senior high school, many of these same conditions hold, though the situation has definitely improved since 1963.

The entire curriculum could be designed to present a view of employment: music, art, mathematics, English, etc., could include content about employment opportunities and requirements in related occupations. Curricula could be constructed in spiral fashion to enable each student to learn about the world of work at higher and higher levels of specificity as he proceeds through school. If such a program were to be implemented, Federal vocational education funds should be provided, on a contract basis, for development of curriculum materials and teacher training for any school program which will contribute to understanding of the world of work. While such programs are not vocational education, and salaries for teaching them need not be reimbursed, it is to the advantage of vocational education that they be provided, and provided accurately.

Trends in Vocational Education

Enrollment trends are currently more in line with labor market developments than ever before. Enrollments in home economics and agriculture continue to increase but at a rate slower than the increase in total vocational enrollments. The numbers being trained in these areas do not exceed the needs of the Nation, but, in terms of priority uses of scarce funds, it would be preferable to expand other areas more rapidly and these less rapidly. Distributive education enrollments are low in relation to the proportion of sales jobs in the economy but perhaps high enough considering the pay scales in many of these jobs. Enrollments in trades and industries are lagging surprisingly relative to the demands and the earnings opportunities available. Considering the growth of attractive opportunities, the enrollments in the technical and health fields are most disappointing. Other fields which have received too little attention include most occupations employing large numbers of women, most of the consumer and producer service occupations, occupations important in public employment, the unskilled occupations, and those occupations in which few people are employed per community (even though they may be quite significant when the entire State or Nation is considered).

On the other hand, the apparent growth of training for office occupations is hopeful and in line with needed and available opportunities for girls, though the available data allow us only to assume that the enrollment increase is real rather than simply a paper increase due to the reporting of enrollments required as a condition of Federal support.

Vocational Education Facilities

Facilities tend to be poor in areas where all education facilities are poor and good where investments in education are high. Even where there is evidence of deterioration, overcrowding appears to be a more serious problem than outdated equipment. As pointed out in Section II, the 1963 Act has made important contributions to the capacity and quality of vocational education facilities. However, many are currently questioning the concept of the area school which seems to intensify the separateness between vocational education and academic education and to mark vocational students as second class citizens of their home schools where they attend only a rushed part day.

The comprehensive high schools, another great hope of recent policy changes, are also being challenged. Some charge that they do not generally provide really comprehensive offerings, while marking the vocational student academically and socially as being of lesser status. In many large cities, students are divided among college prep high schools, vocational and technical high schools, and general high schools. Outside the large cities, these three programs are operated under the same roof and called a "comprehensive" high school. But small high schools cannot possibly offer a program broad enough to be comprehensive, and many of the larger schools are comprehensive only in name. The student bodies in their three curricula are separated by social, economic, and intellectual barriers which are rarely breached.

The State of Innovation

Although impressive innovations are under way in many States, there appears to be a too frequent reluctance to adopt such innovations, particularly when they have been developed by institutions outside the public vocational education establishment. Innovation consciousness often appears to be more intense at the local level than at State and national levels. However, the U.S. Office of Education has pressed continuously for expansion of innovative programs in vocational education.

There is particular backwardness, with notable exceptions, in undertaking an orientation to the world of work in the junior high school or earlier to better prepare students for future vocational choices. There has also been a general failure to recognize that vocational education may have as much or more to offer as a technique for motivating students to learn by doing as it does as a method of skill training. This is particularly important in light of studies suggesting that a relatively low proportion of high school students make occupational use of specific vocational skills learned there.

Innovation, to have any real impact, must reach each instructor. In theory, every school district determines the content of instructional materials and the effectiveness of instruction. In practice, the teacher determines what shall be taught. Because he cannot teach what he does not know, there are often tremendous gaps in instruction. In practice, even the largest school district cannot prepare instructional materials for each of its courses. Millions of dollars of Federal funds have been spent to develop instructional materials for certain science courses, but almost nothing has been spent on similar materials for vocational courses.

Obviously, it is inefficient to expect every school district to develop its own. The school district should spend its funds in choosing and modifying existing instructional materials to meet its needs. But the Federal Government must subsidize the preparation of instructional materials where the low demand prohibits commercial production.

Part-time Cooperative Education and Work Study

The "learning by doing" concept is particularly relevant to the important but under used part-time cooperative education program and the work-study program of the 1963 Act. Formal instruction in school classrooms, shops, and laboratories is most valuable in the initial stages of vocational education. Properly planned, formal vocational instruction not only teaches basic skills, knowledges, and attitudes, but it teaches students how to learn on their own. Equally important for many students, it demonstrates the importance of other school subjects. For the adult, formal vocational instruction offers the opportunity to learn the theory and rudiments of new developments in his occupation, or a way out, should he need to shift occupations.

No one would think of teaching typing skills except through formal instruction, but formal instruction alone does not produce competent secretaries. Ideal vocational education combines formal instruction with learning on the job. This combination was first developed for apprentices and has been successful wherever it was intelligently applied. Apprentices who learn skills on the job at the same time they acquire related knowledge in the classroom are likely to be leaders. "Apprentices" who learn only on the job or whose classroom instruction is not related to their work are not as successful. Nor are apprentices generally successful when their range of instruction on the job or in class is so narrow that they cannot learn the entire occupation.

More recently, formal instruction and on-the-job training have been combined in the part-time cooperative program. First used in collegiate engineering instruction, it has been adapted to high school vocational education with marked success. Oddly, it has rarely been used in junior colleges, though it is an excellent method at this level of instruction. The high school part-time cooperative program usually requires that the student work half of each day and go to school the other half. Usually, the student is at least 16 years old and is a junior or senior. While at work, he is supervised by a school-employed coordinator who makes certain that he is not exploited and that he is receiving worthwhile instruction. When the student is in school, he spends one hour per day studying the theory of his occupation. The coordinator, who teaches this class, makes certain that what the student learns is related to his work. The student also takes other academic subjects.

The part-time cooperative plan is undoubtedly the best program we have in vocational education. It consistently yields high placement records, high employment stability, and high job satisfaction. Students cannot be trained faster than they can be placed. The availability of training stations with employers is limited by the needs of the employer.

This program is also popular with students. Pay, an opportunity for instruction which is obviously "real-life," and prestige all contribute to this popularity. Usually, many more students apply than can be accepted; this leads to rejection of the students who need it most, and undoubtedly contributes to the excellent record maintained by those who are accepted. Making it available to all who desire it would largely eliminate this "skimming" process.

Time Requirements in Vocational Education

Fearful that the academic educators of 1917 might offer vocational education for too limited periods each day, the supporters of the Smith-Hughes Act specified that at least half of each day be spent in useful and productive training work. As with many such regulations, however, the time requirement became a fetish. Many schools required the student to spend three hours per day in a shop and one or two hours per day in classes concerned with "related" technical information. With a five- or six-hour school day, this left little time for other subjects. Even though legislative requirements were later relaxed somewhat, the schools changed very slowly.

Now, however, most schools outside the large cities require only two or three hours per day of vocational education, and the trend is toward making it available only in the last year or two of high school. Similar classes, offered earlier in the student's career or offered for a shorter length of time each day are considered to be a part of general education, and are not reimbursed from Federal funds.

The principal remaining anomaly in the time schedule for vocational education classes is that some schools require the time spent in all vocational classes to be the same. Drafting requires considerably more time to learn than does welding, yet the same amount of time is usually spent on each. Some able students can learn a given skill in half the time required by less able students, yet the time requirements for each are usually identical. But this situation is common in education generally and applies equally well to classes in history, mathematics, and other subjects.

Relevance to Labor Market Conditions

Every vocational program should be based on a study of employment supply and demand and consideration of student mobility. In practice, data on supply usually are not available; data on demand are unreliable; and an implicit assumption appears to be that no graduate of the program will ever leave the school district.

The best information on the adequacy of a vocational education program comes from the follow-up of the student who is placed on a job. Research indicates clearly that the most successful vocational programs are those which assume responsibility for placing their graduates and thus get feedback on their strengths and weaknesses. The vocational placement officer, the student, his employer, and his fellow workers know the strengths and weaknesses of the program. Without the link of the placement officer, this information is unlikely to get back to the school. If the graduate cannot be placed in the field for which he is prepared, something is wrong. Acceptance of placement responsibility by vocational educators would provide a built-in test of adequacy and relevance.

The Financing of Vocational Education

Like most education, vocational education aids the individual, his employer, and society. But it also has costs, many of which are really investments. In high school, the individual pays extra fees for the expensive materials he uses, and he foregoes earnings; in junior college the fees and foregone earnings increase and to them is often added a substantial tuition; in adult education, costs to the individual are not such a serious obstacle because he is often employed full time. Costs to the individual become extremely high in certain proprietary schools.

Costs to the employer vary greatly. Direct and indirect costs may be enormous. Trained workers are an absolute necessity if he is to stay in business. He may elect to train them himself, steal them from another employer who trained them, rely on the worker to pay the costs of training in a proprietary school, or rely on the worker and the public to pay training costs in a public school.

In practice, most employers use all four of these methods. But large employers are more likely to plan training for their own workers than are small employers. Excessive cost per trainee prohibits extensive formal training by small employers. These employers are more likely to recruit trained workers (often from other small employers) simply because they have no choice. Often, however, they have to pay severely for this practice, either in excessive wages or in lowered efficiency, because they are unable to appropriate the best workers.

Proprietary schools tend to attract students who seek "glamour" fields such as radio, television, cosmetology, secretarial work, and nursing. They also attract adults who are interested in instruction not provided by public schools. Usually, private schools provide instruction in a new field long before the public schools. Like the public schools, their placement record depends on the quality of their product and on the current demand for employees. Unlike the public schools, they spend a great deal of effort on selling their wares to the prospective student.

Undoubtedly the least expensive way for an employer to get trained manpower is to have the individual employee or prospective employee pay for training done by private schools. The next most inexpensive method for the employer is to have the training done to his specifications by the local public schools. The influence of local employers seeking to shift their training costs is a key reason why so many schools act as if none of their students will ever leave the school district.

The employer who will not or cannot afford to train his own workers should pay more for the training provided by the public than does the employer who does train his workers. Stealing trained employees may be a necessity at times, but regular larceny should be discouraged, perhaps by a tax on failure to provide training. We are unwilling at this time to recommend such a tax. We do recommend careful studies of the effectiveness of such taxes in England and France, and perhaps in other countries.

The financial burdens of vocational education are often inequitably distributed. Since vocational education benefits the individual, the employer, and society, each should pay a portion of the cost. At least for the individual who would otherwise be on relief or in prison, it makes sense for his contribution to be deferred, permitting him to attend school and pay his share through loan repayments and taxes on the additional income he will earn. Moreover, it seems unjustifiable for the vocational education student to pay higher fees than the academic student. We don't expect the chemistry student to pay for chemicals, but we often charge the welding student for welding rods.

Inequities also exist in the ways in which costs of vocational education are shared by the local school district, the State, and the Federal Government. In most cases, by far the largest share is paid by the local district. In spite of the efforts of some local districts to keep their students at home, these actions seem completely ineffective. Why should the major portion of the cost of educating potential migrants be borne by the local tax payers? This problem of local costs is compounded by the extreme variation in wealth from one local district to the next. Two steps would seem to be warranted: First, decrease the proportion of local costs by providing more State and Federal funds and, second, delete an administrative ruling which requires State and local matching of funds by purpose and by project. The effect of this ruling is to make poor districts pay as large a proportion of matching costs as rich districts.

The State share of Federal funds is based on population and income. This formula does not take into account State and local effort: Some poor States are spending a great deal (relative to income), while other poor States spend very little. The same is true for wealthy States. We believe that the Federal Government should reward heavy State and local effort to support vocational education.

Most States disburse State and Federal funds to local schools on the basis of teacher salaries. This rewards wealthy districts which are able to pay high salaries, and it rewards small districts which have inefficiently small classes. We believe funds should be distributed on the basis of average daily attendance of students. This would have the additional benefits of rewarding districts which maintain enrollments throughout the school year and would provide accurate enrollment data for the first time.

The Federal Government's share of the costs of vocational education should be increased, we believe, because of increasing mobility of students, because of the obvious benefits of vocational education, and because it is in the national interest that the needs of disadvantaged students and disadvantaged areas of the Nation be met.

Coordination with Other Programs

The Vocational Education Act of 1963 was only one of many programs introduced during the 1960's to assist the unemployed to compete more effectively for available jobs and, in some programs, to provide public service jobs for them. Among these are the Manpower Development and Training program, the Job Corps, the Neighborhood Youth Corps, the Work Experience and Training program, and the New Careers program. Their chief contrast with vocational education is that they are remedial in nature. In fact, the frequent failure of the schools in the past to motivate students and to prepare them occupationally has created the demand for remediation. Even with the best of occupational preparation in the schools, however, the need for remedial programs will continue. Technological change will make some skills obsolete; business establishments will fail or move; consumer tastes will change, leaving workers to find new skills in order to be absorbed in new employment. The apparently inexorable trends toward better preparation will leave many of the older workers handicapped in competition with the younger. However, adequate vocational education can minimize these problems.

Though remedial programs are making significant contributions, they are still inadequate in capacity. Unfortunately, they were established piecemeal to meet current crises, with too little attention to interrelationship with other programs, existing or proposed. Duplicated services are available among some programs, and other needed services do not exist. Some population groups are subject to competition among programs, and others are neglected. Some programs pay stipends to trainees, while others do not. Some programs require heavy local expenditures, while others are almost totally federally financed. Program administration is divided and scattered among numerous Federal, State, and local agencies in a confusing welter of eligibility requirements, application procedures, and funding sources. In the confusion, the areas and groups needing help the most tend to find it least. Often this is a result of a lack in leadership and sophistication. All of these programs relate in some way or other to vocational education. Many rely upon its resources. All the programs, remedial and preventative, and, more importantly, the clients they are designed to serve, would profit by rationalization, coordination, or consolidation.

The Timing of Occupational Preparation

The current status of occupational preparation is clouded by an unfortunate tendency to consider vocational and general education as incompatible. Some critics maintain that narrow vocational programs are crowding out more widely useful general programs. There is no doubt that a few vocational education curricula are narrow and stultifying: A program which prepares all Negro students for personal service occupations or a program which spends two-thirds of the school day on vocational subjects cannot be justified. Equally bad is the occasional vocational curriculum which really has no general education content: All of the "academic" classes are diluted and bear such titles as "mathematics for printers" and "vocational English."

However, good vocational and general education programs are far from incompatible. They should in fact reinforce each other. General education provides the basis for understanding the theory upon which the vocational courses are based. Vocational education leads many adolescents to see for the first time that mathematics, science, and English are useful and important.

This misunderstanding of the relationship of vocational and general education has led some persons to advocate the abolition of vocational education in the public schools. They often argue that "industry prefers to train its own workers." This statement is sometimes supported by presidents of large companies which can afford to operate training programs, though the statements of the company presidents would be more persuasive if they were not negated by the actions of their own personnel directors who invariably hire the best trained applicants. Very few presidents of small companies could possibly argue that they prefer to provide all the vocational training needed by their employees.

Another frequent argument is that vocational education has no place in the public schools because it is a subsidy to employers. Those who hold this view almost invariably support professional education in public colleges, and really are saying that occupational preparation (and some degree of subsidy) is justifiable only for that minority of our population which goes to college.

Other theorists are willing to support vocational education in the public schools but believe it should be postponed until after high school graduation. There is some merit in this position. Most youths cannot secure meaningful employment until age 20, and when specific vocational education is received long before it can be used, many of the skills, knowledges, and attitudes will be forgotten.

There is no question that the trend is toward postponement of specific vocational education until junior college years. Unfortunately, however, most youths do not reach junior college. Indeed, many of them drop out before the junior year of high school when most vocational education courses now begin.

The problem of retention of early training is not peculiar to vocational education. The knowledges and skills of science are also apt to be forgotten if they are not used. This does not lead us to postpone all science instruction to the junior college years. Instead, we begin science instruction in the early elementary grades. As the student goes through school, he passes through a "spiral" science program which repeatedly exposes him to science concepts on a higher and higher level. A general feeling for science is imparted at first, and instruction becomes more and more specific as he goes through school. If the student enjoys science, it can lead to a greater appreciation for other subjects such as English and mathematics.

Considerations such as these lead to the curriculum proposals presented later in this report. This curriculum lends intelligibility to other academic subjects; it encourages the student to stay in school until he is prepared for meaningful employment; and it postpones the more specific (and easily forgotten) types of instruction until they are needed.

The Results of Vocational Education

Our deliberations have identified several areas which need additional attention. But in spite of these difficulties and problems, publicly supported vocational education is the only formal means of employment preparation available to most non-college students. Apprenticeship is an important route which depends on the help of vocational education for related instruction, but it involves relatively few youths in a limited number of trades. As already stated, the Manpower Development and Training program, the Job Corps, and other similar training programs are primarily remedial in nature, rendering their important services to those who failed to take advantage of opportunities for occupational preparation in the schools. MDTA is, in the main, dependent upon State and local vocational education for personnel and facilities, and other remedial programs have varying degrees of similar reliance.

Limited follow-up data continue to show a high proportion of placement for vocational students, even though many of them choose further training and many shift to other occupations. Sample studies give high marks to vocational education for its impact on the subsequent employment experiences of its graduates, particularly in contrast to those in the "general" curriculum (Whether this finding indicates the strengths of the former or the weaknesses of the latter is debatable.). Studies relating the costs of vocational education to the benefits derived have given it solid support. When controlled for differences in native ability, vocational students profit substantially as compared to others in both employment and earnings. The agenda for the future suggests further improvement and expansion of vocational education. It is in pursuit of that objective that we discuss, in the following section, some of the basic concepts essential to adequate occupational preparation and career development.

IV. BASIC CONCEPTS OF EDUCATION FOR EMPLOYMENT

As earlier sections have shown, the Vocational Education Act of 1963 in many ways charted a major reorientation of vocational education. However, in the brief time available, the promise of the Act has not been realized. Meantime the world of work and the problems of preparation for it, access to it, and successful performance in it have become even more complex. Out of the changing social and economic environment of the past two decades have emerged clearer concepts of career development, some new and some modifications of earlier ones. From these concepts we can draw operational principles and design a system of legislative and administrative changes necessary for achieving vocational education for all. Three concepts are particularly relevant to this report.

Academic and Vocational Education

It is no longer possible to compartmentalize education into general, academic, and vocational components. Education is a crucial element in preparation for a successful working career at any level. With rising average educational attainment, better educated people are available so that the employer seldom needs to accept the less educated. If it represents nothing else, a high school diploma is evidence of consistency, persistence, some degree of self discipline, and perhaps even of docility. The relevance of education for employment arises from better educated labor and a technology that requires it. The educational skills of spoken and written communication, computation, analytical techniques, knowledge of society and one's role in it, and skill in human relations are as vital as the skills of particular occupations.

On the other hand, employability skills are equally essential to education. If education is preparation for life, and if practically everyone's life and opportunities for self expression and self fulfillment include work, then only the successfully employable are successfully educated. American society is achievement oriented and attributes something less than wholeness to the nonstriver and nonachiever. Culture and vocation are inseparable and unseverable aspects of humanity.

Vocational education is not a separate discipline within education, but it is a basic objective of all education and must be a basic element of each person's education. It is also a teaching technique which may have even more to offer as method than as substance. As a selecting out process for the professions, education has fostered, stressed, and rewarded the verbal skills important to these pursuits. It has given too little attention to development of attitudes, manipulative skills, and adaptability to new situations. In the process of emphasizing verbal skills, the predominant methods of instruction are lecture and discussion, and little attention is given to the alternative technique of learning by doing. As discussed earlier, for many students, the techniques of vocational education can supply a core around which an attractive package of academic as well as skill content can be prepared which will be more palatable and useful to undermotivated students than either alone. This may be most applicable to those from deprived environments whose verbal experiences have been limited and whose time horizons have been shortened by expectation of failure. Skill development can be accomplished through work experience or through education in the school's shops and laboratories. The key is to build a better means of integrating academic education, skill training, and work experience. The common objective should be a successful life in which employment has a crucial role.

The Constancy of Change

The second premise is by now a cliche: "Nothing will henceforth be more constant than change." Technological and economic progress feeds on itself, opening new vistas and closing the old. The under-prepared are threatened by displacement, and the well-prepared are confronted with new opportunities. Both require adaptability. Preventive measures can reduce the demand for remedial programs but never eliminate the need for them. Appropriately prepared persons may be highly adaptable, but that adaptability may depend upon upgrading present skills as well as acquiring new ones. The need for continuous learning, formal or informal, will certainly become universal. There will always be those with inadequate preventive occupational preparation who will need remedial help.

The demand upon vocational education is clear: Programs for youth must prepare them for change; programs for adults must be universally available, and must emphasize coping with change.

Toward Freedom of Opportunity

Finally, the most treasured value of our society is the worth and freedom of the individual. Each individual is entitled to the benefits of a social system which will make it possible for him to get from where he is to where he has the potential to be. One operational measure of freedom is the range of choice available to the individual. The major constraints upon the range of choice are ignorance and poverty and disease and discrimination. Education can reduce the barriers of ignorance and proper occupational preparation can lower the barriers of poverty. They cannot eliminate disease and discrimination but they can substantially contribute to overcoming them.

Operational Principles

A number of operational principles follow from these premises:

1. Vocational education cannot be meaningfully limited to the skills necessary for a particular occupation. It is more appropriately defined as all of those aspects of educational experience which help a person to discover his talents, to relate them to the world of work, to choose an occupation, and to refine his talents and use them successfully in employment. In fact, orientation and assistance in vocational choice may often be more valid determinants of employment success, and therefore more profitable uses of educational funds, than specific skill training.

2. In a technology where only relative economic costs, not engineering "know how," prevent mechanization of routine tasks, the age of "human use of human beings" may be within reach, but those human beings must be equipped to do tasks which machines cannot do. Where complex instructions and sophisticated decisions mark the boundary between the realm of man and the role of the machine, there is no longer room for any dichotomy between intellectual competence and manipulative skills and, therefore, between academic and vocational education.

3. In a labor force where most have a high school education, all who do not are at a serious competitive disadvantage.

But at the same time, a high school education alone cannot provide an automatic ticket to satisfactory and continuous employment. Education cannot shed its responsibilities to the student (and to society in his behalf) just because he has chosen to reject the system or because it has handed him a diploma. In a world where the distance between the experiences of childhood, adolescence, and adulthood and between school and work continually widen, the school must reach forward to assist the student across the gaps just as labor market institutions must reach back to assist in the transition. It is not enough to dump the school leaver into a labor market pool. The school along with the rest of society must provide him a ladder, and perhaps help him to climb it.

4. Some type of formal occupational preparation must be a part of every educational experience. Though it may be well to delay final occupational choice until all the alternatives are known, no one ought to leave the educational system without a salable skill. In addition, given the rapidity of change and the competition from generally rising educational attainment, upgrading and remedial education opportunities are a continual necessity. Those who need occupational preparation most, both preventive and remedial, will be those least prepared to take advantage of it and most difficult to educate and train. Yet for them, particularly, equal rights do not mean equal opportunity. Far more important is the demonstration of equal results.

5. The objective of vocational education should be the development of the individual, not the needs of the labor market. One of the functions of an economic system is to structure incentives in such a way that individuals will freely choose to accomplish the tasks which need to be done. Preparation for employment should be flexible and capable of adapting the system to the individuals' need rather than the reverse. The system for occupational preparation should supply a salable skill at any terminal point chosen by the individual, yet no doors should be closed to future progress and development.

In short, an environment is emerging in which nearly all require salable skills which demand intellectual as well as manipulative content and which include the base for constant adaptation to change. An increasing amount of the knowledge necessary to success must be organized and presented in a formal manner; the pickup or observation methods of the past are no longer adequate. Rural schools with their inadequate offerings and ghetto schools with their deficient resources, added to the initial environmental handicaps of their students, can never hope, without special assistance, to gain on the quality conscious suburban schools. Education is neither the unique cause, nor the sole cure of the problems of the rural depressed area or the urban slum. But it is a necessary factor.

V. TOWARD A UNIFIED SYSTEM OF VOCATIONAL EDUCATION

That most of the concepts of Section IV were in the minds of the authors of the Vocational Education Act of 1963 is apparent from its Declaration of Purpose:

> that persons of all ages in all communities of the State--those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational handicaps--will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.

An adequate system of vocational education capable of achieving these objectives while coping with a changing environment, should, we believe, have the following characteristics:

1. Occupational preparation should begin in the elementary schools with a realistic picture of the world of work. Its fundamental purposes should be to familiarize the student with his world and to provide him with the intellectual tools and rational habits of thought to play a satisfying role in it.

2. In junior high school economic orientation and occupational preparation should reach a more sophisticated stage with study by all students of the economic and industrial system by which goods and services are produced and distributed. The objective should be exposure to the full range of occupational choices which will be available at a later point and full knowledge of the relative advantages and the requirements of each.

3. Occupational preparation should become more specific in the high school, though preparation should not be limited to a specific occupation. Given the uncertainties of a changing economy and the limited experiences upon which vocational choices must be made, instruction should not be overly narrow but should be built around significant

families of occupations or industries which promise expanding opportunities.

All students outside the college preparatory curriculum should acquire an entry-level job skill, but they should also be prepared for post-high school vocational and technical education. Even those in the college preparatory curriculum might profit from the techniques of "learning by doing." On the other hand, care should be taken that pursuit of a vocationally oriented curriculum in the high school does not block the upward progress of the competent student who later decides to pursue a college degree.

4. Occupational education should be based on a spiral curriculum which treats concepts at higher and higher levels of complexity as the student moves through the program. Vocational preparation should be used to make general education concrete and understandable; general education should point up the vocational implications of all education. Curriculum materials should be prepared for both general and vocational education to emphasize these relationships.

5. Some formal post-secondary occupational preparation for all should be a goal for the near future. Universal high school education is not yet achieved but is rapidly approaching reality. Post-secondary enrollments are growing, and before many years have passed, the labor force entrant without advanced skills gained through post-secondary education, apprenticeship, or on-the-job training will be at a serious disadvantage. Universal advanced training will bring increased productivity, higher standards of living, and greater adaptability, to the profit of the economy as well as the individual. If post-secondary education and training is to be universal, it must be free. Fourteen years of free public education with a terminal occupational emphasis should be a current goal.

6. Beyond initial preparation for employment, many, out of choice or necessity, will want to bolster an upward occupational climb with part-time and sometimes full-time, courses and programs as adults. These should be available as part of the regular public school system. They should not be limited to a few high demand and low cost trades,

but should provide a range of occupational choice as wide as those available to students preparing for initial entry.

7. Any occupation which contributes to the good of society is a fit subject for vocational education. In the allocation of scarce resources, first attention must be paid to those occupations which offer expanding opportunities for employment. In the elementary and junior high school, attention can be paid only to groups of occupations which employ large numbers of people, and instruction must be restricted to broad principles, common skills, and pervasive attitudes which will be useful in a broad range of employment. These restrictions are less and less valid as the student goes through high school and junior college, until, in adult education, instruction is justified in even the most restricted field if it is valuable to the individual and to society.

8. Occupational preparation need not and should not be limited to the classroom, to the school shop, or to the laboratory. Many arguments favor training on the job. Expensive equipment need not be duplicated. Familiarization with the environment and discipline of the workplace is an important part of occupational preparation, yet is difficult to simulate in a classroom. Supervisors and other employees can double as instructors. The trainee learns by earning. On the other hand, the employer and his supervisors may be more production than training oriented. The operations and equipment of a particular employer may cover only part of a needed range of skills, necessitating transfer among employers for adequate training. The ideal is to meld the advantages of institutional and on-the-job training in formal cooperative work-study programs.

9. Effective occupational preparation is impossible if the school feels that its obligation ends when the student graduates. The school, therefore, must work with employers to build a bridge between school and work. Placing the student on a job and following up his successes and failures provides the best possible information to the school on its own strengths and weaknesses.

10. No matter how good the system of initial preparation and the opportunities for upgrading on the job, there will

always be need for remedial programs. Remedial programs will differ from the preventive in that many of the students will require financial assistance while in training; the courses must be closely oriented to the labor market to assure a quick return to employment; and the trainee will be impatient of what may seem to be the "frills" of regular vocational programs.

11. At every level from the elementary school through the post-secondary, adult and remedial programs, there will be those with special needs as defined by the 1963 Act. For both humanitarian and economic reasons, persons with special needs deserve special help.

12. Many communities are too small to muster sufficient students for a range of occupational offerings broad enough to provide realistic freedom of occupational choice. Potential students, often those with the greatest needs, live in areas too isolated for access to meaningful training. Others come from a home and neighborhood environment which makes sound preparation for life and employment difficult. An adequate system of occupational preparation will provide residential facilities wherever their absence presents an obstacle to anyone in need of education and training.

13. The public system for occupational preparation must be supported by adequate facilities and equipment, buttressed by research and innovation, and by the preparation and upgrading of competent teachers, counselors, and administrators. To assure constant improvement, it must provide for constant evaluation and reporting of problems and accomplishments.

14. The system of occupational preparation cannot operate in a vacuum. Data must be made available on public and private training opportunities to eliminate undesirable duplication. Data on supply and demand for various occupations must be available on a broader and more accurate basis. But total training opportunities must be based, not on the number of jobs which are available, but on the number of persons needing training.

Creation of the system of occupational preparation outlined here must be a continuing pursuit. The Vocational Education Act of

1963 and the efforts of vocational educators have carried the Nation a substantial way toward these objectives. Our recommendations which follow will, if adopted, assure further progress. But they will never end the quest because, fortunately, society does not stand still.

VI. RECOMMENDATIONS

To continue pursuit of the objectives set by the Vocational Education Act of 1963 and to achieve others indicated by the experience of the succeeding four years, it is recommended that the Act be amended to accomplish the following: 4/

1. Administrative complexities should be reduced by combining all vocational education legislation into one Act.
2. A Department of Education and Manpower Development should be established at Cabinet level.
3. Innovation should be encouraged by contracts or grants between the Commissioner of Education and State Boards, local educational agencies, and other public or non-profit institutions.
4. Specific funds and permanent authority should be provided to develop and operate new and expanded vocational education programs for persons who have academic, social, economic, or other handicaps.
5. The Act should provide permanent authority for work-study programs at the secondary and post-secondary levels structured so as to combine education, training, and work experience, as well as offer income opportunities.
6. Residential vocational schools should be constructed and operated under grants from the Commissioner of Education to State Boards of Vocational Education or, with the approval of State Boards, to colleges, universities, and public education agencies.
7. At least 25 percent of vocational education funds should be earmarked for post-secondary schools and adult programs.

4/ Statements of the recommendations presented here have been editorially adjusted but not changed in intent from the specific statements of the Council. The rationale in support of these recommendations is found in the general report of the Council prepared in response to the legislative requirements--Vocational Education: The Bridge Between Man and His Work (Publication 2). Washington: U.S. Government Printing Office, 1968.

8. Vocational homemaking education should be included in a separate section of the Act with specific funding authorization.

9. Funds should be distributed to the States on bases which will provide incentive for increased enrollment and attendance, and improved performance.

10. The Act should permit matching of the Federal allotment on a statewide rather than area-by-area or project-by-project basis.

11. To end the disharmony between the planning processes of the schools and the appropriations practices of Congress, provision should be made for States to receive allotments earlier in the calendar year and to spend funds through the succeeding fiscal year.

12. Salaries and expenses needed for the administration of vocational and technical education should be included in the annual appropriation provided by the Act, rather than in a separate budget as at present.

13. The presently misnamed "State plan" should be recognized as merely a legal contract between the Federal and State agencies. The present "projected program activities" should become a 5-year projected plan subject to annual updating.

14. The preparation and upgrading of professional and para-professional personnel should be recognized and financially supported as an objective of the Act.

15. The Opportunity Grant program of the Higher Education Act of 1965 should be extended to post-secondary technical and vocational programs by setting aside 25 percent of the funds appropriated for Title IV of that Act.

16. The feasibility of reimbursement to employers for unusual costs of supervision, training, and instruction of part-time cooperative students should be tested in pilot projects.

17. The prescribed 10 percent of the sums appropriated under Section 4(a) of VEA'63 should be available for research, with the Commissioner of Education allocating the moneys in the most advantageous manner among the three legitimate claimants:

(a) Grants or contracts to colleges and universities and other public or non-profit private agencies and institutions to pay part of the cost of research, and dissemination of research results;

(b) Grants or contracts approved by the operating Bureau for evaluation, demonstration, experimental programs, and for dissemination of results;

(c) Grants to States for paying part of the cost of State research coordinating units, State research, evaluation, demonstration, experimental programs, and dissemination of results.

18. An annual descriptive and analytical report on vocational education should be submitted to the President and Congress by the Office of Education.

19. Each State should be required to conduct a periodic statewide review and evaluation of its vocational education program.

20. "Pre-vocational" training and "employability skills" should be included within the definition of vocational education.

21. Confusion concerning the meaning of the term "area vocational education facilities" should be ended by deleting the word "area."

22. The responsibility of vocational educators for students until they are successfully placed in training-related jobs should be affirmed by including initial job placement within the definition of vocational education.

23. Achievement of the Act's objectives at the levels of enrollment currently contemplated will require an appropriation of $1,565,000,000 per year. It is our unanimous conviction that no sounder investment can be made by the citizens of the United States than this--an investment in their own, their children's, and their economy's future.

I.	Grants to States and grants authorized by the Commissioner of Education (Students served--8,000,000)	$500,000,000	
	A. Grants to States	($437,500,000)	(50-50)
	B. Grants by Commissioner	($62,500,000)	(100)
II.	Work-Study Program (Students served--575,000)	$350,000,000	(90-10)
III.	Exemplary and Innovative Programs, General and Disadvantaged Population (Students served--175,000)	$200,000,000	(100)
IV.	Residential Vocational Schools (50) (Students served--25,000)	$200,000,000	(90-10)
V.	Programs for the Socially, Economically, and Culturally Disadvantaged (Students served--175,000)	$300,000,000	(90-10)
VI.	Vocational Homemaking (Students served--2,000,000)	$15,000,000	(50-50)
	Total Authorization	$1,565,000,000	

Total Students Served--10,950,000 including 2,000,000 in Home Economics.

Note: Supporting data are shown in Vocational Education: The Bridge Between Man and His Work, (Publication 2)--General Report of the Advisory Council on Vocational Education.

The following recommendations are directed to the attention of the Commissioner of Education. They are recommendations which the Council feels will make decided improvement in the status and quality of vocational education.

24. In order to provide appropriately for curriculum materials needed in vocational education, two to four centers should be established for development of such materials.

25. The National Advisory Committee on Vocational Education should have a full-time staff in the Office of Education in order that guidelines may be established for helping the States make more effective use of State Advisory Boards.

26. A Learning Corps should be established on a pilot basis to provide improved learning experiences for economically disadvantaged youths, particularly inner-city youths. Such corps would arrange for young people to have the opportunity of living in selected homes in rural, small city, and suburban communities and to enroll in the local schools where skill development for employment would be a part of their educational program.

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This report was prepared by the Advisory Council on Vocational Education, 1968, and published by the U.S. Office of Education, Department of Health, Education, and Welfare. The opinions expressed in the report are those of the Advisory Council and do not necessarily reflect official opinion of the U.S. Office of Education.

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